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Table of Contents

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ORIGINAL ARTICLES—

"Some Heterodox Opinions," by A. E. TAYLOR, M.D., Ch.B.	1
"The Application of the New Definition of Normal Labour to the Clinical Study of Obstetrics: A New Outlook on Midwifery," by MARY C. DE GARIS, M.D., B.S.	6
"Acne Vulgaris, its Cause and Treatment: An Essay for the General Practitioner," by E. H. MOLESWORTH, M.B., Ch.M.	10

REPORTS OF CASES—

"Three Cases of Paratyphoid Fever at the Mel- bourne Hospital," by R. J. WRIGHT SMITH, M.B., B.S., and G. W. ASHTON, M.B., B.S. . . .	12
"Urteritis Cystica," by J. BURTON CLELAND, M.D. . .	13
"Amyotonia Congenita," by K. A. STEPHENSON, M.B., B.S.	13
"A Case of Acute Myelitis," by W. PERCY WHITE, M.B., B.S.	14
"Cerebral Fat Embolism," by INGLIS H. COWLING, M.B., B.S.	14

REVIEWS—

Pseudo-Science	15
Cæsarean Section	15
A Manual on Nursing	16
Tumours	16

LEADING ARTICLES—

The Dunedin Congress	17
--------------------------------	----

CURRENT COMMENT—

Thyroid Metastasis	18
Congenital Enlargement of a Limb	19

SOME HETERODOX OPINIONS.¹

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For many years I have held opinions which are opposed to those generally held; that is to say, these opinions are heterodox. This evening I propose to put before you some of those opinions and if you can and will point out my errors, I trust that I am sufficiently open to reason to amend my ways.

Sunstroke.

Later on I shall put forward views which I expect that some of you will oppose very strongly; but let us begin with a mild case: sunstroke.

I suppose it will be conceded that the opinion generally held in regard to this illness is that it is caused by the action of the sun. In my opinion it is caused by nothing of the sort; the action of the sun has very little to do with its causation. This illness is characterized by high fever and

ABSTRACTS FROM CURRENT MEDICAL LITERATURE—

Dermatology	20
Radiology	20

BRITISH MEDICAL ASSOCIATION NEWS—

Scientific	22
Nominations and Elections	27

MEDICAL SOCIETIES—

The Medical Sciences Club of South Australia . .	27
--	----

PUBLIC HEALTH—

Queensland	28
----------------------	----

CORRESPONDENCE—

The Australasian Medical Congress (British Medical Association)	30
Medical Libraries	30

PROCEEDINGS OF THE AUSTRALIAN MEDICAL BOARDS—

New South Wales	31
Queensland	31
Reciprocity Between Great Britain and Italy . .	31

OBITUARY—

Herbert Clatworthy	32
------------------------------	----

BOOKS RECEIVED

MEDICAL APPOINTMENTS

MEDICAL APPOINTMENTS VACANT, ETC.

MEDICAL APPOINTMENTS: IMPORTANT NOTICE

DIARY FOR THE MONTH

EDITORIAL NOTICES

exhaustion, it is frequently accompanied by unconsciousness, twitching, convulsions, a rapidly acting failing heart and so on. It is usually of sudden onset and is a highly dramatic occurrence; it has excited the curiosity and investigation of many competent observers. Heterodox though I may be, I am happy to discover that I am not entirely unsupported by first hand and competent observers. When such observers relate their investigations, for example in *The British Medical Journal*, *The Lancet*, *The Reports of the Wellcome Research Laboratory* at Khartoom and other publications, one cannot help being struck by the unanimity with which each and all declare that true sunstroke is rare in the district wherein they make their observations, be this district the Sudan, Mesopotamia, the hotter parts of India or other districts notorious as sunstroke areas. They declare that the majority of conditions ascribed to sunstroke in their particular district are not sunstroke at all, but fulminating cases of malaria, of sandfly fever, of tick fever, of some one or other of the acute tropical illnesses which happen to be endemic in the area they serve. Somewhere or another in their report they are sure to emphasize the importance of chronic alcoholism as an aetiological factor of sunstroke.

¹ Read at a meeting of the Victorian Branch of the British Medical Association on May 5, 1926.

To me it has always been difficult to understand the mechanism by means of which external heat could penetrate the scalp and the skull and damage the underlying brain. I mean, of course, local damage as distinct from a general raising of the body temperature. The scalp and the skull are so richly supplied with blood and so quickly is this removed, that it seems impracticable to raise the heat of the brain appreciably above that of the general body temperature. Consider further that the outstanding feature of sunstroke is hyperpyrexia. Hyperpyrexia can occur only as a result of derangement of the heat regulating centre in the *medulla oblongata*. That external heat could penetrate not only the scalp and the skull but all that thickness of brain is inconceivable. I mean that it is inconceivable for it to do so without first producing recognizable symptoms from damage to the more superficial structures of the brain: paralysis, blindness and so on. Nothing of the sort occurs; the patient suddenly falls unconscious and is then found to have hyperpyrexia. Apart from external damage, what conditions may give rise to hyperpyrexia? Why, we know hyperpyrexia is usually caused by toxins circulating in the blood and poisoning the heat regulating centre.

There are, moreover, other objections to the solar theory of the causation of sunstroke, objections that ought to be considered. Many patients have sunstroke who have never been in the sun. On board steamships the firemen are subject to an illness of a very similar nature. Such difficulties are commonly met by terming these classes of case "heat exhaustion." In my opinion these classes of case are strictly comparable to sunstroke and are only indirectly and very partially caused by the heat.

Those of you who have been like myself at one time medical officer on board steamships, will bear me out when I say that to every single case of heat exhaustion one is called upon to treat in the ship's firemen, there are at least ten cases of an illness which the firemen call "the cramps," that is to say, a somewhat violent abdominal colic caused by their drinking quantities of cold water whilst heated. This occurrence of abdominal colic in firemen subject to heat exhaustion is important to remember in view of the hypothesis I shall presently put forward as to the true causation of sunstroke.

In July, 1907, I was in America in the city of Chicago and during my visit sunstroke was very prevalent. It will give you an idea of the prevalence of the illness when I say that the daily papers published a list of the daily fatal cases of sunstroke, giving the names and addresses of each victim, two or three a day over a period of three or four days. That was the mortality; what the morbidity was I do not know, but it was very high.

To me the heat did not seem excessive (33.3° C. or 92° F. in the shade). Frequently I have known it higher in Melbourne, but we would not dream of getting sunstroke in Melbourne at that temperature. Indeed it is abundantly evident that another factor is vitally concerned in the causation of the illness. I mean another factor beyond the heat of the sun.

It is time I informed you what I considered that factor to be, but first I would like to call your attention to the parallelism between infantile convulsions in children and sunstroke in adults.

I suppose I am orthodox and not heterodox in saying that I believe the great majority of cases of infantile convulsions are due to food poisoning. No doubt it happens occasionally that the child consumes food which is not wholesome, but usually this is not so. Usually the food is quite wholesome and sweet when eaten, but for one or more of several reasons the infantile stomach fails in its function of keeping the food sterile. At the least it ferments, at the worst it goes putrid and the poisons thus generated are absorbed into the blood, circulate in the brain and cause fever (maybe even hyperpyrexia) and convulsions. I always wash out the bowel and sometimes wash out the stomach also in every case of infantile convulsions I am called upon to treat, if they do not yield promptly to the classical hot bath.

Now that, I believe, is exactly what happens in sunstroke; namely, the food decomposes in the stomach and in the intestines and the patient has food poisoning. In the adult, however, the mechanism for the prevention of the fermentation and more especially of putrefaction of food in the alimentary tract is much more efficient than it is in the infant and almost always it needs further inimical factors before this disaster will occur. Among such inimical factors "chronic alcoholism" is of overwhelming preponderance.

I had come to this conclusion from observation in sunstroke cases before the war and had evolved what I consider to be a more rational line of treatment than the classical one. For a period during the war I was stationed at Suez, one of the notoriously hot situations in Egypt. Whilst there I had several cases of sunstroke to attend to in whites and one or two in Arabs. The whole of the white patients I treated were British imperial soldiers; none of them were Australians. All these patients were alcoholic, all had subacute to acute gastritis with much mucus and sour smelling and frequently foul smelling stomach contents. I treated every patient in the same way, namely by passing a stomach tube and washing out the stomach. This measure was always gratifyingly successful.

Whatever you may think of my opinion of the causation of sunstroke, I earnestly recommend you to use this measure instead of or in addition to the classical one of ice to the head, heart stimulants and so on, should you be called upon to attend cases of sunstroke. If a stomach tube should not be handy, probably a hypodermic injection of apomorphine would do as well. For myself I prefer the stomach tube, though I admit there is some danger of drowning an unconscious patient unless great care is taken.

It must not be supposed that I consider that chronic alcoholism is a necessary factor in the causation of sunstroke, though undoubtedly it is a very common factor. Anything that will so derange

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the digestive organs as to allow the food to ferment and more especially to putrefy, will create a liability to sunstroke. The Arabs get it occasionally and they are total and life-long abstainers from alcoholic liquors; but they are terrible offenders in other ways in outraging their digestive organs.

The Food Factor Diseases.

As examples of food factor diseases we may take scurvy, rickets and beri beri. I suppose I am right in saying that "deficiency of one or other of the vitamins is the causation of these illnesses" is the usually accepted opinion. If that be so, my own opinion is heterodox. I do admit that deficiency of vitamin is a factor, perhaps a very potent factor; but in my opinion this deficiency is not the essential factor in any of these illnesses. I am convinced that rickets is caused by a specific infection. I am convinced that beri beri is caused by another specific infection. In regard to scurvy I am not sure; there are a larger number of hypotheses put forward to account for this illness, none of them being very convincing; deficiency of vitamin is one of them. The hypothesis which to my mind is the most convincing is that of Torup, of Christiania, who contends that scurvy is caused by chronic ptomaine poisoning and is due to eating putrid food.

I make no dogmatic assertions in regard to scurvy. I have an impression only and that gained by perusal of the literature, for I have not had even one case of adult scurvy to treat and only five cases of infantile scurvy. Let me run over the evidence briefly that ptomaine poisoning may possibly be the essential causation of scurvy. Scurvy was at its height in the bad old sailing days, when most of the meat consumed was either carried in the pickle tub or put there after slaughtering on board. To put it at the lowest the principal incidence of scurvy was coincident with the greatest probability of the consumption of putrid meat. The same probability occurred in the arctic and antarctic expeditions, formerly so dangerous on account of the likelihood of outbreaks of scurvy. The only serious outbreak of scurvy in anything like recent years was amongst the negroes in South Africa during the Boer war. Scurvy broke out in some of the camps and in those only in which the negroes ate their meat in a putrid condition. Here it may be mentioned that many, if not most of the negro tribes enjoy eating their meat tainted. One or two white orderlies were scurvy stricken in these scurvy camps; but it was notorious that any white orderly so stricken had developed the habit of eating tainted meat.

One or two cases of adult scurvy have been reported on an exclusive diet of bread and tea.

The occurrence of scurvy in infants (some of them breast fed) is a difficulty in accepting a ptomaine poisoning hypothesis. A difficulty also occurs in adult scurvy on an exclusive diet of bread and tea, though I suppose bread might become putrid both outside the digestive tract and inside it. It is very difficult to accept a deficiency of vitamin hypothesis in infantile scurvy on a diet of milk; some of the patients even being breast fed.

My own five patients were all of them consuming abundance of vitamin when they were stricken, though I cannot say that any of the vitamin swallowed was absorbed. All my patients were on a diet of cow's milk; all of them, however, had profound gastro-intestinal disturbance; the motions contained mucus and curd and smelt peculiarly offensive. In fact, I consider that the putrefaction in these cases took place inside the digestive canal. Apparently there was not enough putrefactive material absorbed to cause convulsions, but the continuous absorption of small quantities may have caused the scurvy. Mind, I do not say it did, only that it may have done so. It was remarkable how quickly they each and all recovered on a suitable dilution of their milk together with added potato and orange juice. I do not wish to decry the use of vitamins in these cases. Indeed it is certain that the little patients will die unless it is given, but I do not consider the deficiency of vitamin was the primary cause of the illness. The primary cause I consider to have been a failure of the digestive organs to prevent fermentation and putrefaction of the food. Nansen has reported cases of scurvy cured by giving tainted meat.

Now in regard to rickets anything more unsatisfactory, contradictory and confused than the present day literature in regard to rickets would be difficult to find. The very multiplicity of the factors put forward as the essential causation is enough to throw grave suspicion on the whole of them. Want of actinic light has been blamed, also want of proper ventilation. Deficiency of the appropriate vitamin is the hypothesis held by the vast majority of thinkers and practitioners. Professor E. Mellanby issued a report through the Medical Research Council and has put forward an ingenious hypothesis and supported it with much experimental work. It is an hypothesis of much novelty, namely the presence in cereal foods of a rickets factor or poison (not an infection, but an intoxication) and so on. There is not the time here to name, much less to discuss, the various contradictory hypotheses. Just here I may mention that I am not satisfied that the bony changes described as occurring in rats after feeding experiments are proved to be rickets. The bony changes described in puppies are almost certainly rickets, but there is insufficient evidence that this is not due to infection in addition to the peculiar feeding.

Further, I am not satisfied that the polyneuritis produced in pigeons in feeding experiments is beri beri. Indeed I think it is not beri beri.

There is incontrovertible evidence that cod liver oil is of the greatest importance in the treatment of rickets, perhaps in prevention also. The curative action of cod liver oil is often delayed (six months or more occasionally). This should not be so if rickets is due to deficiency of vitamins.

The successful general in war is the one who studies large maps and takes a view of the whole of the operations. To be successful in a difficult subject scientists should take wide views also, world wide views and wide in point of time as well as space.

To my mind the most important factor in the study of the aetiology of rickets is its distribution. Unfortunately I can neither take nor give so wide a view as I should like and ought. I am only acquainted with rickets in England, Europe, America, Egypt and Australia. I do not know its incidence or prevalence in China, in India, in South America and so on and to make a real judgement I ought to be.

However, rickets is very common in England, in Europe, in Egypt and in the United States of America. It is very uncommon in Australia. This statement needs supporting. In the late medical congress, held in Melbourne, Dr. Harvey Sutton made the statement that of two thousand children examined in Melbourne, 20% manifested clinical evidence of rickets. I have every respect for Dr. Harvey Sutton's competence and for his care, but I must put it on record that my estimate of the prevalence of rickets in Melbourne is very different from his. Indeed, I suspect that we have in our minds different entities. It is true that I practice and live in Dandenong which is out of Melbourne proper, but I see a sufficient number of children born and brought up in the slums of Melbourne visiting Dandenong for various reasons and the opinion I have formed is that rickets is rare.

I have clinical notes of sixteen thousand patients who have been under my care. Of these at least a quarter were children when first seen by me. Of these four thousand children, three only were suffering from mild rickets. I cannot have missed these cases wholesale, for I am familiar with rickets. I had no difficulty in recognizing it promptly when in practice in England. I had no difficulty in recognizing it promptly amongst the Arab children in Egypt. Further, the most frequent cause of difficult labour in England is rhachitic deformity of the pelvis. If 20% of the children had rickets, one should come across rhachitic deformity of the pelvis occasionally during ordinary midwifery practice. Indeed one does do so amongst young mothers who have migrated to Australia from England, France and elsewhere where they were born and brought up. But so far as my personal experience goes the native born Australian mother does not have deformity of the pelvis due to rickets. Perhaps some of those who have a larger midwifery experience, may have something to say on the subject.

I have put forward my personal view that rickets is rare in Australia; on the other hand, it is very prevalent in the United States of America. A very casual perusal of the literature will satisfy one about that. In a recent article in *The British Medical Journal* a writer quotes 90% of the inmates of an institute as being affected. Another author referring to another institute states that for over a period of three years only 11% of the inmates remained free from rickets.

It is indisputable that rickets is very common now, but it was not always so. In the 1890 edition of Osler's "Medicine" Osler says: "Rickets is uncommon in the United States of America." A few years earlier than that it was so uncommon that

many American doctors visiting Europe had never seen a case and were as keen and interested to see cases as one of us might be to see cases of sleeping sickness or leprosy.

Now conditions of sunlight have not altered in the United States during this interval. Conditions of feeding have not altered. Ventilation and sanitary conditions of the slums have not altered, except for the better. What has altered is the tremendous influx of central European immigration into the United States during these few years. And I assert that they have carried the disease and infection with them. Taking wide views in time and space, the evidence of infection and not of vitamin deficiency is overwhelming.

Consider further in New York is a large negro population. The vast majority of the negro children are affected with rickets in early infancy. Now it is the rule for negro mothers to feed their babies at the breast. The bottle fed negro baby is a great rarity. It is not to be denied that occasionally the breast feeding is supplemented, but one writer has estimated that of the negro children affected with rickets 50% of them were breast fed exclusively at the time of the first manifestation of the attack. In face of this is it possible for deficiency of vitamin to be the essential cause?

For all that I wish it to be clearly understood that I am convinced that deficiency of vitamin is a potent factor in predisposing to an attack of rickets. Exhibition of appropriate vitamin is the correct treatment.

This view of the aetiology of rickets is of great importance. A disaster of the first magnitude has happened to the United States of America, namely, a clean population has become heavily infected with rickets. A disaster of similar nature threatens Australia; it will surely occur unless precautions are taken to prevent it.

I think the British Medical Association ought to take this matter up and prove my views to be either mistaken or true. If my views are true, then the Board of Health should be vested with proper authority to prevent the further importation and spread of rickets.

An important paper follows mine and I must not take up the time necessary to expound my views on beri beri.

Vaccines.

That the vaccines are useful in the treatment of disease is, I take it, the orthodox view. If that be the orthodox view, then my views are heterodox. I hold that vaccines are useless; they are worse than useless, they are mischievous. I go very far in this regard, for I consider that a very large section of scientific thought is labouring to promulgate an error.

I consider that the attitude of the medical profession towards the use of vaccines in the treatment of disease is strictly comparable to the attitude of the medical profession towards blood-letting in the days of venesection. And as venesection has

passed into just discredit, so also will the exhibition of vaccines in the treatment of disease pass into the limbo of discarded and discredited remedies. Presently, no doubt, the medical profession will awaken to facts. Metaphorically it will rub its eyes and wonder how it was possible for its senses to be so beclouded by prejudice and authority as to glaze the palpable fallacies of this method for so long a period.

Before going further into this question I would like to say that the word "vaccine" to describe a killed culture is unfortunate. It is not as though a better word were not available, the word "bacterine." It is hard, perhaps it is impossible, to change a word that has become established, so I suppose it must remain. The word vaccine has most precious association with the glorious name of Jenner and is properly applied to attenuated but living cultures of organisms.

Though Koch was the first to use killed cultures extensively in treatment with his celebrated tuberculin, it was Haffkine who first put the so-called vaccines to their legitimate uses to the incalculable benefit of mankind by using them for purposes of prophylaxis. His name and reputation are necessarily somewhat bedimmed by the ignoble uses to which his remedies have been put, by the treatment of active disease with the so-called vaccines. Just here it is appropriate for me to state that it is only against the use of vaccines in the treatment of disease that I am protesting. Of their uses for purposes of diagnosis and of prophylaxis I have no word except of thankfulness and praise.

I wish it to be understood that I include in my condemnation all vaccines without exception; from tuberculin or rather from the whole series and varieties of tuberculin right along the line through stock vaccines to the very latest and most elaborate autogenous, detoxicated, specially sensitized vaccines. One and all are mischievous rubbish and ought to be scrapped, as were scrapped the extraordinary and often disgusting remedies which encumbered the pharmacopœia of one hundred years ago.

Profitably to discuss the use of vaccines it is necessary to examine and recapitulate the theory of disease being due to infection. This is a simple and beautiful proposition. According to this theory infectious diseases are caused by the invasion of the organism infected by lowly infecting organisms which have become adapted to be parasitic. These lowly infecting organisms establishing themselves either on or in the tissues of their host, live and grow at its expense. The processes of life of these infecting organisms necessarily result in the manufacture of waste products; some of these waste products are either poisonous *ab initio* or they become poisonous in the process of evolution. They are called toxins.

That is the main theory. Of course this does not cover the whole of the ground; there are extensions of this main theory. For instance, it is evident that the infected organism reacts to these waste products or toxins and manufactures defensive material in

the endeavour to combat the infecting agent. Some of these reactionary products have been recognized. Of such a nature appear to be the antitoxins, the agglutinins, the bacteriolysins and such bodies.

This theory of infection is well authenticated and it will require very potent and unequivocal evidence to shake it. But how does it fit in with the exhibition of vaccines for the treatment of disease? Obviously it does not square with it at all. It is as if one should treat diabetes by giving not "Insulin" but sugar, should treat lead poisoning by giving lead, should treat diphtheria by giving not antitoxin but toxin itself.

Looked at in this light, the method is so obviously contrary to all the dictates of common sense and sound reasoning that it would not be considered for a moment, were it not that the theory of infection has become so overlaid and obscured by desperate endeavour so to twist, distort and supplement it to bring it into line with facts which are not facts at all. And there you have it. The exhibition of vaccines for the treatment of disease has been built up on faulty observation of facts and on supplements to the theory of infection, which supplements are not supported by sufficient, by relevant or by legitimate evidence, often indeed on no evidence at all.

I will acknowledge that if there is any evidence of acceptable nature that any of the vaccines are ever beneficial in the treatment of disease, my position is untenable and, well authenticated though the theory of infection appears to be, yet it is defective. Surely that is wide enough; it indicates at any rate the sincerity and confidence with which I hold my views.

The upholders of the treatment of disease by vaccines appear to do so on two grounds, theoretical and practical. It is necessary to examine these.

To take the theoretical first, some people have become convinced that the exhibition of vaccines is beneficial. I hold that they are mistaken, but assuming for a moment that what they contend is true, it then becomes necessary either to discard the theory of infection or else to find some means of reconciling it with these new facts. It is fairly easy to postulate a whole series of possible explanations, but it is a difficult and tedious matter to test and prove these postulates.

Perhaps the most popular of these possible explanations is the supposition that there is an insufficiency of bacterial products in the body tissues generally to provoke a reaction, so vaccines are injected to supply that deficiency. There is no evidence that there is an insufficiency of bacterial products, but on the contrary there is abundant evidence of a mischievous excess. If the injection of vaccines resulted in a curative reaction which did not occur in its absence, that in itself would be evidence. It is asserted that this does occur. I say it does not occur and when it appears to occur, it is faulty observation.

Again it is or at any rate it might be contended that the injection of vaccines involves the injection

of other substances than toxins and these substances produce a curative reaction. This is the wildest guess work; it is incumbent on anyone putting forward such an hypothesis to test it. So far as I am aware, such an hypothesis has never been tested.

Now for the practical. Most men are justified in saying: "I have no opportunity of testing these matters for myself, but I am informed by others that the use of vaccines is beneficial, therefore I shall use them." That attitude is quite right and proper, but it should not stop at that; they should form their own judgement on the effect of usage and not rely entirely on authority. Others may say: "I have tried the vaccines and I am convinced that their use is beneficial; I don't care if their use squares with theory or not, results are good enough for me." That attitude also is quite right and proper, but that again should not stop there. By honest endeavour truth will out. Let them go on trying and the more especially let them try to judge results without bias; mistaken impressions will ultimately become corrected if unbiased judgement continues to be used.

It all boils down to this: if injection of vaccines results in favourable influence on disease, their use is justified.

There are any number of people who will testify that in their hands the injection of vaccines has been beneficial; unfortunately none of the evidence that has been brought before me is such as I can accept.

In regard to my own experience I have made careful and continuous trial of the vaccines during a long series of years, vaccines prepared by the most eminent bacteriologists of Melbourne; in no instance have I found acceptable evidence that their use was beneficial. In all too many instances I have noted added mischief. My own experience is necessarily meagre and limited. I have, however, kept a sharp look out in the literature of the subject and have found plenty of evidence that the use of vaccines is mischievous. There is plenty of evidence also that their use is beneficial; but this evidence is never unequivocal, it is worse than suspect, it is unacceptable.

I suppose that I shall be inundated by evidences by the speakers who follow. One doctor will say: "I treated a case of recurrent boils and nothing did any good until I used vaccine; the condition cleared up promptly and has not recurred." Another will say: "I use catarrhal vaccine for the prevention of colds; my patients are so satisfied with the effects that they recommend others to come and have the treatment also." Another will say: "I used to treat whooping cough by classical methods; since I have been using vaccine treatment I am satisfied that my patients have shorter illness and less severe than without it." And so on.

I do not say that such evidence is valueless; but I do say there was just as good evidence as that for the use of bleeding for anything and for everything.

I also have had my dramatic successes from the injection of vaccines; but not oftener or more

dramatically than I have had by the injection of colloidal metals, by the injections of reputedly radioactive solutions and suchlike measures.

You will get a percentage of dramatic successes with any treatment and the more bizarre it is, the more rare and expensive, the more dramatic will be the result.

Conclusions.

Admittedly my views are heterodox; I do not wish to force them upon you. But I do ask you to examine the evidence again with open eyes. Examine it carefully and candidly. Ask yourself one or two questions. Do those sanatoria that use tuberculin bear consistently better results than those which do not? If you are satisfied that tuberculin is mischievous, ask yourself: "Why is tuberculin mischievous and catarrhal vaccine appears to be beneficial?" "Do the larger infectious diseases hospitals use whooping cough vaccine?" "Why is it that, whereas acknowledged experts whose experience is colossal compared to my own, fail to get any benefit at all from whooping cough vaccine?" "I get what I believe to be favourable results, are they incompetent or am I mistaken?"

I feel sure the medical profession will presently shake off this incubus, this horrid superstition. And I would like to see Australia take the lead, point the way to the rest of the civilized world, the road away from error towards the truth.

THE APPLICATION OF THE NEW DEFINITION OF NORMAL LABOUR TO THE CLINICAL STUDY OF OBSTETRICS: A NEW OUTLOOK ON MIDWIFERY.¹

By MARY C. DE GAEIS, M.D., B.S. (Melbourne),
Geelong, Victoria.

THE new definition of normal labour was published in THE MEDICAL JOURNAL OF AUSTRALIA, August 22, 1925, and runs as follows: "A normal labour is one in which the uterine contractions act thoroughly efficiently, leading in a short time to the spontaneous delivery of a healthy baby and causing but little or no distress or pain to the mother."

This definition is physiological in its character, concrete in its terms and absolute as a standard. It is not impossible, as is proved by the occasional occurrence of cases of painless labour.

By it labour pain is relegated from its present unique position of being regarded as a physiological pain to the more reasonable place of being looked upon as equally pathological with any other pain and as being indicative of faults in labour, that is pain in labour is a useful signal of ill health just as is other pain elsewhere in medicine and surgery.

On criticism the definition is found to be functional in its terms and to cover the action of the

¹ Read at a meeting of the Victorian Branch of the British Medical Association on May 5, 1926.

uterus itself, the condition of the infant and the effect on the mother. Most people will have no difficulty in accepting the first two clauses of the definition, but will look askance at the third. In the hope of converting doubt to approval, I here briefly recount the steps by which I reached this definition. It was not reached at one bound by myself, far from it; it took twenty years of wonder and two years of steady thinking to develope the main idea: neither is it likely to be so reached by my hearers, though I hope that they will ascend the steps more speedily than I did.

From the time of my student days the thought of pain in labour has lain both as a resentment and as a problem in my mind, sometimes almost subconscious, sometimes erupting into activity from contact with some special circumstance, as for example a very difficult labour or on the other hand a very easy labour. No one ever considered the pain a problem. It was one of the things that had to be endured and the curse of Eve was its final and sufficient explanation. If this curse were taken as the first recorded explanation of what was regarded as a problem even in those early days or as the punishment for eating wrong things (as it probably is) it would not be so far out after all!

While I was resident as a young graduate at the Women's Hospital, Melbourne, two women were admitted, one of whom said that she had had no pain during labour and the other of whom said that she had had one pain. Their babies were born before admission. Soon after going to Geelong, I attended a case of very easy labour and so had my attention forcibly drawn to the matter again.

Long sure that such pain was pathologic, I could offer no explanation of its occurrence and neither apparently could anyone else. Sir James Mackenzie had in his "Symptoms and Their Interpretation" described labour pain as a referred visceral pain, but offered no reason for its occurrence. It was clear after his work that symptoms preceded signs and were of diagnostic value, but of what was labour pain a symptom and how could it be used in diagnosis? The answer to these questions flashed across my mind when reading McCollum's "Newer Knowledge of Nutrition." He clearly shows that fertility, viability, lactation, duration of life and vigour depend largely on the diet. If the mother and the product of labour are affected by her diet, surely the process of labour is also thus affected. It seemed obvious, therefore, that pain was an indication of faulty labour, of faulty uterine action, of uterine inertia. The artificiality of our diet would explain the commonness of pain in labour and the varieties of defects that might and do occur in daily diet, would explain the immense variation in labour pain as seen in practice by everyone of us, while the more satisfactory diet of country districts accounted for the traditional and well accepted fact that countrywomen suffered less than townswomen. Of course other errors in the general health, as focal sepsis, play an important part too.

That the humoral condition, the constitution of the blood, is of importance to health and efficiency,

probably including uterine efficiency also, is sufficiently proved by a consideration of "Insulin" reactions in the clinic and the effect of Ringer's fluid on cardiac contractions in the laboratory.

Instead of adopting the average experience of labour as our standard, we should really adopt the best and easiest labour known as our standard.

I therefore accepted pain as an indication of uterine inertia and began to evolve my definition of normal labour. In the definition of normal labour we should find the standard by which to measure and classify the variations of average labour, the first step necessary to discover their causes.

Such a radical change in theory as an alteration of the definition of what constitutes the normal must have enormously important implications in any science or art and obstetrics is no exception.

Originally an art is based on empiricism, then some inquiring or generalizing mind develops a theory to explain well known facts. When the theory has proved satisfactory, practice is further developed by the use of the theory, so that in advanced arts theory governs practice. An ounce of practice is proverbially worth a pound of theory; but a pound of practice remains a pound, whereas a pound of practice fertilized by an ounce of theory soon becomes a ton. Theory being dynamic may become geometrically reproductive, while practice is but arithmetical. False theory is correspondingly harmful.

That present day obstetrics both needs and receives criticism is obvious to the reader of our journals. All over the world writers attack the results of our obstetric work, but there is no generally accepted explanation of its failure. The specialist and the teacher say that the general practitioner does not practise the principles he has been taught. The general practitioner retorts that the former do not know the conditions in general practice. He should, however, point out that he does practise the principles he has been taught and very well too, for it is quite easy to do so and that as he is not successful in spite of his care, it must be because there is some other obstetric principle or principles that have been neglected because overlooked.

What are the governing principles of present-day obstetrics? They may be summarized practically as cleanliness to avoid the risk of puerperal fever and the necessity in antenatal care to examine the urine so as to guard against eclampsia and to be on the outlook for a contracted pelvis or an unfortunate lie, so that one may be prepared for the one and correct the other before labour sets in. Mechanics and infection from carelessness are the bugbears of our student days.

In obstructionless Australia if there is difficulty with delivery we blame the pelvis instead of the powers! However, the almost universal advice, even in rickety countries, to try "the test of labour" is in itself enough to prove that it is the uterine efficiency that is most important. Every textbook tells us that most delayed labour is due to *inertia*

uteri, while certain authors tell us that the death rate rises with the duration of labour. Surely an understanding of uterine inertia is the fundamental necessity in obstetrics.

Without an absolute standard for uterine action (this we should find in the definition of normal labour) we cannot make progress in its study. In fact no progress in its study has been made for many a long day owing to this very absence of a standard by which to measure. In the study of the causes of maternal and fetal morbidity and mortality it does not seem to occur to most people that a statistical study of labour itself is necessary to make much real progress or better still of the whole childbearing entity, pregnancy, labour, puerperium and infant. I do not propose to go fully into my views on uterine inertia tonight, as I am still engaged in a study of this question on which I hope to have the opportunity to air my views at the next Congress. I have, however, made and published a classification of the commoner variations of average labour, using my definition of normal labour as the standard and my theory that pain is the first indication of uterine inertia as the key to the classification. I hope also to succeed in demonstrating the correlation in causation of painful labour and congenital debilities.

In any other science rigid and absolute standards are necessary to successful progress. My definition gives such an absolute standard for obstetrics and not an impossible one. We all know that no two labours are quite alike, that labour shows a different character in different cases. We can now proceed to observe and classify them as a preliminary to seeking causes. The adoption of this definition entails also a functional or symptomatic observation of childbearing as a whole. Let me mention two cases briefly as instances of functional observation of labour (these cases are to be dealt with in more detail in my paper on *inertia uteri*).

In one the cervix dilated very slowly, taking several days to reach three-quarter dilatation, then going back to the size of a five shilling piece and completely failed to retract. Rupturing the membranes at three-quarter dilatation made matters worse rather than better. The head was well down from the end of the eighth month and advanced during labour, so that the functions controlling dilatation and expulsion were present though poor, while the function causing withdrawal of the cervix was completely absent. I had finally to finish the dilatation of the cervix myself (quite easily) and deliver through an unretreated cervix. While I was doing so a good deal of bleeding occurred, not from tearing.

What all these things mean I do not know and I am doing a good deal of thinking about them to try and find out, but it does seem clear that they show a separability of the various functions of the uterine muscle and of the fundal and cervical actions.

In another recent case dilatation was very fair, expulsive pains were excellent, the head was so low in the pelvis as to be nearly on the perineum from right at the beginning of labour and yet no progress was made. On attempting to put on forceps I found a very contracted resistant vagina and delivered the patient of a vigorous baby weighing 3.1 kilograms (seven pounds), with its occiput anterior, causing a bad tear.

What was the cause of the delay in this case? The child was small, in good position, the pelvis of proper size, the forceps fairly easy, the pains appeared of average efficiency. After hard thinking I came to the conclusion that she had a visceromotor reflex, a contraction of the vaginal and perineal muscles, leading to obstruction and to the tearing of a resistant perineum. Surely both her pain and her contracted vagina were symptoms of a moderate uterine inertia? Compare this with the visceromotor reflex that Mackenzie described in *angina pectoris*.

I wonder if an electrotrograph might play as important a part in the study of the individual functions of the uterine muscle during labour as the electrocardiograph played in a similar study of the cardiac functions. No doubt separable uterine functions can be demonstrated clinically or in any other way only in special cases and these cases will be found only by being sought. A reference to my classification of average labour, however, will convince anyone that the functions of the first, second and third stages may vary separately or in sequence. How often a tedious first stage, for example, is followed by a speedy delivery, almost as often as by a delayed second stage.

The apparent is not always the real. Just as the earth appears flat and is really round, just as the sun appears to move round the earth, while really the earth revolves around the sun, so the process of labour appears necessarily painful. Yet the occasional case of painless labour shows that theoretically it is not necessarily painful. Just as the theory that the earth was round led to the discovery of America, so may the theory that the normal labour is painless lead to the average everyday labour becoming so.

It always seems disgraceful to me that we are not able to tell a woman why her labour has dragged on for days, while another woman has had a speedy delivery. There must be some explanation for the difference. In all cases we should criticize our patients' dietary, general health, freedom or otherwise from focal sepsis and go into the medical history in the hope of discovering a remediable cause. We will criticize her general health and mode of life when she fails to deliver herself, instead of blaming a guiltless pelvis.

Anyone who has revised his recollection of his cases, will know that the duration and efficiency of labour and amount of suffering endured depend chiefly on the duration and efficiency of the first stage. The first stage is clearly a physiological and medical problem and not a mechanical one. The head also is often well down into the pelvis and forceps delivery easy in many of these cases, so showing that mechanical obstruction is not the cause of the delay and failure in natural delivery. In the practical absence of rickets from Australia we find a golden opportunity for the study of delay in labour, uncomplicated by obstruction.

If it is true (and it is true, though yet to be proved to everyone's satisfaction) that the normal

labour is painless, the normal baby vigorous, that the faulty labour, the faulty baby and the faulty pregnancy and puerperium are all correlated in their causation, then the securing of the truly normal labour as the average labour of our community, offers more benefits to our people than any other single medical or other measure. We should then have A1 motherhood, A1 babyhood, A1 nationhood. Probably the consequent increased resistance, the improved diet and mode of living would abolish other diseases whose treatment and whose origin now cost us thousands. The health of mothers and babies should be regarded as an index of the health of the nation. As dysmenorrhœas *et cetera* depend on the general (probably humoral) health, so do dystocias.

Do you wonder that I say that *inertia uteri* is the fundamental problem of obstetrics whose solution solves many other problems too?

Typhoid fever was not abolished in Melbourne by supplying good nurses and doctors and hospitals, but was reduced by boiling the water and scalding the milk and was finally wiped out by the sewerage system. Neither will the maternal death rate be done away with by merely palliative measures.

Few women think of their one in two hundred chance of death from childbearing. Practically all dread the certain suffering.

Women have been emancipated socially and politically and have even achieved freedom from the tyranny of hampering clothes. The discovery of the causes of pain in labour will emancipate them physically too. May the Victorian school of midwifery confer this great boon on mankind!

I offer my definition of normal labour and my theory of uterine inertia as good working tools for the development of obstetric theory and the consequent improvement of midwifery practice and results.

The chief aim of my paper has been to induce someone with greater clinical opportunity than I have to put my theories to the test. My practice is only big enough to do suggestive work, not to prove anything.

What are the implications of the new definition? They are five in number. The first is the adoption of a functional approach to the study of midwifery. The symptomatology of labour *et cetera* must be observed. Our cases must be classified. Our absolute standard makes classification easy. Classification necessarily precedes the search for causes.

The second is the acceptance of the fact that childbearing is one clinical entity, occurring in successive stages, pregnancy, labour, puerperium and including its result the infant; that sepsis, toxæmias, haemorrhages, congenital debilities should be considered as complications of childbearing itself and not merely of one of its stages as at present. Such a conception correlates them all in causation. Childbearing is probably a precipitating and not a root cause of illness: it is illness during and not of pregnancy *et cetera*. The use of a tabular analysis of all one's midwifery cases (I use a vertical

columnar method) shows at once the bearing of any detail in any case on any other detail in the same or other cases. For example, such an analysis clearly demonstrates that the febrile puerperium is often directly related to the unhealthy pregnancy. A reliable differential diagnosis between autogenous and accidental puerperal sepsis is still needed. A statistical study and a clinical scrutiny of one thousand cases analysed by my schema would be most illuminating. It would probably reveal many as yet unnoticed relations. These two points are developed in a brief series of papers in my "Clinical Notes and Deductions of a Peripatetic."

The third implication is that labour, being the most active phenomenon of the whole process and the most readily observed, serves as the main indicator of the health of the whole process. It must therefore be carefully studied and classified by its symptoms and signs in the hope of discovering the root causes underlying the numerous variations seen in everyday practice and of explaining the immense variation of the intensity of labour pain as seen by everyone.

The fourth implication involves the recognition of the importance of uterine inertia as being the central and fundamental problem in obstetrics. Its solution solves many other problems too. With it is bound up pain in labour and the liability to fatal complications occurring during motherhood and foetal and early infant life. Uterine action needs detailed study and careful analysis both in the clinic and in the laboratory. The clinician, having observed his patients in detail and having classified them and having surmized possible causes, will turn to the physiologist and say: "We see such and such variations in practice, we assume that a deficiency, separately or together of lime, phosphorus, iodine *et cetera* in the diet may be responsible, is it so?" "Are there separable uterine functions, comparable to the separate functions of cardiac muscle?" "If so, what affects them?" "Does the poisoning from dead and filled teeth affect animal labour *et cetera*?" "If so, in what way?" In the clinic much can be done. Certain treatments might be employed and their effect on the character of the labour and the welfare of the baby noted. For example, *liquor sedans* (Parke, Davis & Company) has a remarkable influence on uterine action, as shown by its success in many forms of dysmenorrhœa. I have often found it relieve false pains and afterpains. I mean to try it during pregnancy in those patients of mine who have had specially painful or tedious labour. The effect of single or polyglandular endocrine products should be tried in the clinic. The supply of lime and phosphorus to mother often relieves the unpleasant early symptoms of pregnancy and should be tried on a big scale to determine their effect on character of labour *et cetera*. *Liquor sedans* has also proved useful for the same purpose. To secure normal labour three things are required: that is, besides the healthy mother and the clean labour, a third condition is necessary, knowledge of the factors on which a truly normal labour depends. I appeal especially to the practitioner who like myself is not

too busy, who has time to wait and see and think about it. What can the man who "does not put on forceps if the baby is born," as one man described his practice to me, know of a normal or even of an average labour? Ease of labour, good recovery and vigour of infant are the real tests of our antenatal care and knowledge.

Fifthly, we conclude that a knowledge of the physiology of childbearing, especially of the action of the uterine muscle, is as important to the successful conduct of average labour as a knowledge of the mechanics of labour is to the successful conduct of much abnormal labour.

Such physiological and clinical knowledge does not as yet exist, but it will do so when the need for it is realized and it may bring in its train the substitution of a truly normal or nearly normal labour for the present-day pathologic average labour, with its high percentage of still-born and weakly babies and damaged mothers.

**ACNE VULGARIS, ITS CAUSE AND TREATMENT:
AN ESSAY FOR THE GENERAL
PRACTITIONER.**

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It has often been remarked that some of the quite common and unimportant diseases which annoy without causing much physical damage, are still interesting and repay thought and work. Such for example is *acne vulgaris*. It makes no threat against life or physical health and hardly even occasions any physical discomfort. Yet, when it affects girls at least, it is a source of dismay not only to the patient but to her mother as well. More than this in the subject herself the disfigurement, long continued if not permanent, is liable to create acute sensitiveness with regard to her infliction and cause her to retreat within her shell, to avoid the social events so dear to the heart of youth, to become solitary and introspective and to use the modern jargon to develop an "inferiority complex."

After all the later teens and early twenties are the years of preening of feathers, of display of charms, the mating season in fact and who can deny that a pimply face is a severe handicap in such a competition. And yet this is just the time that acne selects for its attack, causing much disappointment, repression and sometimes life long bitterness.

And how little do we trouble to treat it—a pot of ointment, a casual warning against constipation and perhaps a comforting assurance that the trouble will disappear when the age of twenty-two or twenty-three is reached; this is all the average acne patient gets from the average medical practitioner.

Now this affords no real comfort or service to the patient nor to her mother. They realize quite well the time limit of the trouble, but are anxious to avoid the serious handicap under which such a patient labours during the period of her greatest physical attraction.

If their family practitioner cannot help them in this to them simple ailment, they are prone to think he is not as clever as they thought him and he may lose thereby.

So from both the points of view of the patient and practitioner it seems worth reviewing the aetiology and treatment of this commonplace malady.

We all know that acne attacks soon after puberty and has nearly always disappeared about twenty-five. But why? The mother asks: "Why should my daughter be so afflicted? She had a beautiful skin till she was fourteen and now just when she wants to look nice, she is disfigured by all these pimples. I can't persuade her to go out, she mopes at home and is becoming unwilling to meet anybody." We have all heard this lament, but how often have we realized how much it means to the patient and her mother?

The remarkable changes at puberty caused by the appearance on the scene of a new and powerful internal secretion, the development of definite sex characteristics, the occurrence of menstruation, the development of the breast and so forth are all familiar. But it may also be noticed that the clear dry and fine skin of infancy often becomes greasy and sometimes muddy and this because of greatly increased activity of the sebaceous glands.

The mammary gland is only a huge and specialized sebaceous gland and from this it can be understood that the internal secretion which stimulates the development of the breasts, also acts with a sting to increase the activity of the undifferentiated sister sebaceous glands. Owing perhaps to over-production of this internal secretion or to over-effect for lack of sufficient check by opposing secretions which have failed to establish at once a satisfactory balance with this new and powerful influence operating upon the metabolism, there often results an excess of sebaceous secretion.

Folks vary as much in the degree of oiliness of their skins as they do in the colour of their eyes or any other personal characteristic. Not a few as infants have slight degrees of xeroderma which worries the child by rendering him liable to eczematous outbreaks in response to small irritations such as dry cold winds. At puberty these worries cease because with the new stimulus their few sebaceous glands secrete enough grease to waterproof the skin, preventing too great absorption and soddening on washing and too rapid evaporation and chapping on exposure. These persons never show any acne.

Most adolescents have a little acne, an occasional spot, a few blackheads, but not enough to worry them. But again not a few who even as children have had a fairly active sebaceous system, when they arrive at adolescence are liable to over-production so that the skin becomes noticeably oily and often assumes a waxy or even muddy tint from accumulation of secretion in the innumerable glands of the skin. These last are almost certain to suffer from a moderate to severe form of acne.

The first stage then seems to be the development of an excess of sebaceous secretion which tends to

accumulate in the glands. The next stage is due to advantage of this culture medium, provided in abundance, being taken by microorganisms to which it is suited. Principal among these is the micro-bacillus of acne. This organism is an anaerobe in culture and even in the skin prefers the deeper parts of the necks of the follicles and grows there most prolifically, because it is more or less protected from the oxygen of the air on the one hand and the oxygen of the blood on the other. A certain amount of desquamation occurs from the lining of the follicle and inspissation of the sebaceous material manifests itself in the neighbourhood of the colonies of bacilli probably as the result of toxic action; these effects together with the enormous masses of bacillary colonies and some particles of dust and dirt constitute the blackhead or comedo.

In the meantime the dammed up secretion continues to accumulate until with the comedo it begins to act like a foreign body to its own follicle. This gives the ubiquitous staphylococcus its opportunity and this contamination adds colour to the hitherto black and white picture and determines the full blown pustule.

Thus far we get by following almost any recent textbook on diseases of the skin which also all agree that the pustules must be evacuated and the blackheads expressed, but then the authors proceed to describe many and various chemical applications with a few preliminary remarks about washing and soaping.

But the really important part is nearly always missed out and this is the prevention of next week's blackheads and next month's pimples. This can be achieved by emptying the glands which are as yet not blocked or are incompletely blocked. The method of doing this is by a system of vigorous pinching (just short of bruising) of the whole of the acne-bearing area, so that the pressure extrudes the contents of the glands and carries with them the commencing obstructions of bacillary colonies and their products situated in the neck of the follicles. The development of gland block and blackhead formation is thus nipped in the bud and regular daily repetition of the pinching will prevent the reformation of the block. And if there be no accumulation of sebum, there is little pabulum for the culture of bacteria and therefore no opportunity or cause for the production of comedones.

The use of X rays which admittedly have a very definite and favourable effect upon acne, achieves its results in a manner comparable to this. But it does it by strongly depressing the secretory function of the sebaceous glands, so that there is for a while little or no production of fresh sebaceous material to keep up the culture of the bacilli. But unfortunately this effect is only temporary and the treatment cannot be repeated for the period required without a grave risk of determining a chronic radiodermatitis.

By the pinching massage method the secretion is not diminished, but the glands are emptied and kept empty and in the process microorganisms are carried out of the necks of the follicles before they can multiply into formidable colonies and there is no

risk whatever incurred in this process of starving the bacilli.

The system of pinching massage demands, of course, intelligent and efficient as well as regular performance of the drill and it may be objected that this will not be obtained from any but exceptional patients on account of carelessness, laziness or lack of comprehension. While to some extent true in the case of boys, it is most decidedly not true in the case of girls by whom a toilet drill of five minutes or so is undertaken with alacrity and performed with religious regularity and meticulous care, in the sure and certain hope that it will improve their appearance.

I have found it the best plan to explain to the patient in simple terms the blocking of the pores and the damming up of their secretion at this time of life, draw their attention to the way in which a splinter causes festering and point out how the presence of a block, a blackhead, causes the same thing. Then I point out that the block must be prevented from reforming and then get down to explaining how this is done.

The patient is told to wash the face in very hot water and lather the face with plain toilet soap, then to steep the face in the water, renewing her breath and repeating the process until the face is flushed and hot. It is explained that this is to soften and render more easy to press out the waxy material produced by the pores. Then the pinching process is explained and illustrated and she is told to pinch till it actually hurts a little, to cover the whole of the area affected in her case and to continue it for two or three minutes. Then she is told to scrub the area which will have become noticeably greasy, with a cotton swab saturated with a mixture in equal parts of ether and spirit which will dissolve the grease and leave the treated surface dry and even will remove droplets of grease which might otherwise remain in the mouths of the glands. It is then pointed out that all the preceding manipulation has been directed to getting the glands empty and the pores clear, so that the medicament will have an opportunity to get where it is wanted, namely some way down into the pores.

This chemical part of the treatment is comparatively unimportant alongside the mechanical emptying of the glands and removal of culture medium for bacterial growth. But it helps and should be used in some form of antiseptic with the idea that some of it will penetrate into the necks of the follicles and render these areas very unsuitable for bacterial growth. I use a solution of 1% of perchloride of mercury in spirit in order that the volatile preparation may have a greater chance of penetration into the follicles left clear by the action of the pinching massage and the solvent effect of the ether.

I think that any ointment is wrong in acne and probably does more harm than good by carrying coals to Newcastle and especially do I think that a vaseline base is fundamentally wrong. We know that workers in paraffin factories develop paraffin acne and vaseline is only soft paraffin. Therefore, it will be wise to steer clear of such dangers and also sternly to forbid the use of any cold cream

which is only paraffin wax beaten up while melted with water and perfume, so that it will help to block rather than clear the follicles. Beside the apparently specific action of paraffin in aggravating or even causing acne, any greasy preparation probably aids the growth of acne bacilli by shutting out the air and favouring an anaerobic organism.

The permission to use sparingly an inert face powder is a concession that makes up for a lot of the trouble, is eagerly accepted and does little harm if no cold cream is used to make it stick on.

This drill is carried out regularly every night for two months, in severe cases in the morning as well and with practice can be performed in five minutes. Usually after a week or two a definite diminution in the number and severity of the lesions encourages the patient to persist and at the end of two months it is generally possible to diminish the frequency to every second night and finally to twice a week. But at this it must be continued until at twenty-two or so the acne age is past for most patients.

Apart from the diminution and final rarity of acne lesions, the constant evacuation of the sebaceous glands removes the opaque waxy tint from the skin and it is not infrequently found that patients continue to perform the drill every night long after they are permitted to leave it for longer periods, because they say that they find it keeps their skin clearer and more translucent.

Beside the above some routine instructions to avoid constipation, to take regular exercise, to avoid starchy and sugary food complete the matter.

In some very severe cases of *acne indurata* I use as a preliminary a three-quarter erythema dose of X rays generated by a current at 130 kilovolts and filtered through one millimetre of aluminium in order to get the condition quickly under control and to give the patient heart. Very rarely do I find it necessary after an interval of four to eight weeks to repeat the dose by reason of any development of fresh activity.

Vaccine treatment (with autogenous acne bacillus vaccine) which I once hoped would afford greater help than it does, I find very capricious in its action as might be expected seeing that the bacillus lives for the most part at least outside the organism and beyond the reach of the blood serum. I still sometimes use it in bad cases that have relapsed after X ray treatment at other hands, when I do not think it justifiable to repeat the irradiation.

The approach of the menstrual period is almost always heralded by a fresh crop of lesions and it is well to warn the patient that the ten days preceding the period should be the occasion for the most meticulous and regular performance of the treatment.

Such is the régime which has rescued *acne vulgaris* from that group of patients whom one hates to see in one's consulting room, because one can do them so little good and has earned more appreciation from patients than many more complicated and difficult procedures for more interesting and serious maladies.

The next best treatment that I know of is for the patient to marry and nurse her own baby, but to achieve this we have generally to cure her acne first, to cure the disease before rendering the treatment possible—the cart before the horse with a vengeance.

Last and a very long way last in my experience come all the lotions and especially the ointments described in the textbooks and used without mechanical removal of the first cause of acne, that is the accumulation of sebaceous secretion. May the method be as useful in other hands as it has been in mine.

Reports of Cases.

THREE CASES OF PARATYPHOID FEVER AT THE MELBOURNE HOSPITAL.

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AND
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EVEN since the war paratyphoid infections have been of very rare occurrence in Australia and we have been unable to find a record of any except for those reported by Dean in this journal in 1920 in which the agglutination reactions were aberrant. The cases reported here are of particular interest as the patients all came from one family living at Port Melbourne, in which the mother gave a history of illness five weeks previously with shivering attacks and severe pain in the back and limbs associated with diarrhoea. Her illness had been regarded as influenza and she had made an uneventful recovery. Nevertheless her serum, tested on February 27, 1926, induced strong agglutination both to a standard culture of *Bacillus paratyphosus B* and to the organism isolated from the blood of another patient (see Case I.) to a dilution of 1 in 320, with weaker agglutination at 1 in 640, but no trace of agglutination to *Bacillus typhosus* or *Bacillus paratyphosus A* in any dilutions.

CASE I.—A female, *wtatis* twenty years, was admitted on February 18, 1926. Her illness commenced three weeks before with diarrhoea and generalized abdominal pain which was somewhat easier after defecation. After a few days the symptoms abated, but returned with increased severity three days before admission. The stools were then of the "pea soup" variety, liquid and foul-smelling with the occasional presence of slime but no blood. On admission the temperature was 40.2° C. (104.4° F.), the pulse rate 132 and the respirations 28 per minute. The tongue was dry and furred, the abdomen was slightly distended and tender in the hypogastrium and there was retention of urine. The spleen was not palpable, no "rose spots" were observed and the leucocyte count was 9,500 per cubic millimetre. On the following day her condition was worse and remained unchanged for the six following days. The temperature remained high with but slight remissions. She vomited several times and was delirious at night. On February 20, 1926, the spleen was definitely palpable and a few rose spots without any bluish colour appeared scattered over the abdomen. On February 25 her temperature fell to normal, but rose again in steps to 39.5° C. (103° F.) by February 28, falling again to normal on March 3, 1926. She made an uneventful recovery.

Culture tubes were inoculated with blood on February 19 and a motile organism was grown which produced acid and gas in glucose and mannite, but did not ferment lactose. On the same day the patient's serum was tested for its agglutinating power against standard emulsions of *Bacillus*

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typhosus and *Bacillus paratyphosus A* and *B*, but failed to react with any of them. Five days later it gave good agglutination against *Bacillus paratyphosus B* to a dilution of 1 in 320. The organism isolated from the blood was tested against standard sera. It gave no agglutination in any dilution from 1 in 100 to 1 in 6,400 with specific sera for *Bacillus suispester A*, *Bacillus suispester B*, *Bacillus paratyphosus A* (Lister Institute strain) or with sera for the two aberrant strains of *Bacillus typhosus* (Burnet and Warner's strain), but agglutinated strongly with specific serum for *Bacillus paratyphosus B* (Lister Institute strain) to a dilution of 1 in 1,600 and weakly to 1 in 3,200. Tested in dilutions from 1 in 20 to 1 in 2,500 with *Bacillus paratyphosus A* serum (Penfold's strain) it gave no trace of agglutination, but was agglutinated by specific serum for *Bacillus paratyphosus B* (Penfold's strain) in a dilution of 1 in 2,500 and by the patient's serum (obtained February 23, 1926) in a dilution of 1 in 160.

Daily repeated attempts to isolate the causative organism from the faeces and urine from February 20, 1926, to March 4, 1926, failed.

CASE II.—A female, *atatis* twenty-five years, was admitted on February 21, 1926, with a history of having been "off colour" for the preceding five days with pains in the back and chest. She continued at work for two days, but then had a rigor followed by backache and severe frontal headache. On admission the temperature was 37.2° C. (99° F.), the pulse rate 100 and the respirations 24 per minute. The leucocyte count was 8,500 per cubic millimetre. A few rose spots were noted on admission and a second crop appeared two days later. Her spleen was never certainly palpable and the temperature which never exceeded 38.6° C. (101.5° F.) was normal on February 25 and remained so. In this case the attempts daily repeated to cultivate bacteria from the urine and faeces from February 22, 1926, to March 4, 1926, failed and the blood proved to be sterile on February 24, 1926, and March 4, 1926. Her serum, however, on February 23 induced no agglutination of *Bacillus typhosus* or *Bacillus paratyphosus A*, but was strongly agglutinating for the organism isolated from the first patient (Case I.) up to a dilution of 1 in 640 and for a standard culture of *Bacillus paratyphosus B* to a dilution of 1 in 320.

CASE III.—A female, *atatis* eighteen years, was admitted on February 23, 1926, with a history of slight backache, weakness of the legs, frontal headache and some generalized abdominal pain for the previous two days. The temperature was 38.8° C. (100.2° F.), the pulse rate 144 and respiration 28. The leucocyte count was 5,000. The temperature which was markedly intermittent, ranged from normal to 38.6° C. (101.5° F.) for six days, but finally reached normal by the ninth day after admission. The spleen was never palpable and no rose spots were at any time observed.

In this case also repeated bacteriological examinations of the faeces and urine failed to reveal any pathogenic bacteria and the blood proved to be sterile on February 26, 1926 and on March 3, 1926. The patient's serum on February 25, 1926, did not agglutinate with either *Bacillus paratyphosus B* (stock) or with the organism from Case I., but on March 2, 1926, the serum agglutinated the last mentioned organism in dilutions from 1 in 80 to 1 in 1,200.

In Cases II. and III. the infection was abortive and the diagnosis rested on the positive agglutination reactions. In none of these cases were any complications observed.

Our thanks are due to Dr. C. H. Kellaway under whose care the patients were and to Miss F. E. Williams for help in some of the observations.

URETERITIS CYSTICA.

By J. BURTON CLELAND, M.D.,

Professor of Pathology, University of Adelaide.

DRS. W. A. HAILES and F. M. BURNET⁽¹⁾ have recently described in this journal a case of ureteritis and *cystitis cystica* in which symptoms were associated with the condition. As the lesion is a comparatively rare one, the

following further example of the condition seems worth recording, though as far as is known it was unassociated with any symptoms during life.

The patient was a male pensioner, aged sixty-five, who was admitted to the Adelaide Hospital in October, 1923, under Dr. Ray complaining of shortness of breath and swelling of the ankles after walking. He died five weeks later, his pulse becoming very feeble towards the end and dropping to forty-two. The systolic and diastolic blood pressures soon after admission were one hundred and thirty and seventy-five millimetres respectively. The arteries did not appear thickened and the urine was of a specific gravity of 1010 and contained pus and albumin. The autopsy (No. 164/23) revealed the capsules of the kidneys to be adherent to the surrounding fat. The kidneys had a highly knobby surface with some projecting cysts; the elevations were pale in colour, the intervening contracted tissue being red; the weight of the two kidneys was one hundred and seventy grammes. The cortex had almost disappeared in places. The pelvis of one kidney was dilated and covered with little rough bead-like vesicles. The ureter was also dilated slightly and showed scattered throughout its course clusters of bead-like elevations. Similar bead-like elevations were present in the other ureter but not in the pelvis of that kidney. There was slight hypertrophy of the left ventricle of the heart.

Reference.

⁽¹⁾ W. A. Hailes and F. M. Burnet: "A Case of Cystitis Cystica Associated with Severe Haematuria," THE MEDICAL JOURNAL OF AUSTRALIA, September 5, 1925, page 285.

AMYOTONIA CONGENITA.

By K. A. STEPHENSON, M.B., B.S. (Melbourne),
Natimuk, Victoria.

AMYOTONIA CONGENITA is a rare disease and as the following case differs in one particular from the usual clinical picture, I thought it worthy to be placed on record.

Clinical History.

M.B., a female, was born December 30, 1922. The nurse who attended at the confinement has given me the following particulars. This was the mother's third confinement and the baby was born in the frank breech position. For about three days following birth the baby had a tendency to assume the following position when placed on its back; the thighs would lie in contact with the abdomen and the feet be in contact with the shoulders. It was soon noticed how very flexible the joints were and the child was exhibited to visitors as being "double jointed."

The following account is taken from my own notes on the case.

The baby was always very good and appeared to thrive well, though it was always flabby. From an early age excessive dribbling was noted and this has persisted though not so much lately. The head was first held up at about six months of age. At ten months medical advice was sought on account of "weakness of the back," the child being at this age unable to sit up without support. At eleven months the first attempts at sitting up unaided were noticed. Teething commenced and progressed normally. At two years of age the child began to shuffle along the floor in a sitting position, using the hands to propel her along. It was at this age that I first saw her. She looked a well nourished child of about stated age with rather a vacant facial expression, somewhat like that seen in a child suffering from adenoids. This expression, together with the escape of saliva from the mouth, was due in some measure to weakness of the facial muscles. Mastication and deglutition, however, were normal. Eye movements were normal.

On grasping any of the limbs, the sensation was as if there was nothing between the skin and the bone but a loose mass of fat. There was practically no difference in the sensation on palpation over the middle of the thigh from that on palpation over the knee joint. No separate muscle tissue could be differentiated.

The limbs could be made to assume unusual positions. On flexion of the wrist, the palm of the hand could be placed on the flexor surface of the forearm and similarly, on extension, the back of the hand could be made to touch the extensor surface of the forearm. Both thighs could be simultaneously abducted to a right angle with the body. The dorsum of the foot could with very little pressure be made to touch the tibia. The shape of the feet was peculiar. The heels appeared to project much further backward than usual. This was due to a soft pad of tissue between the calcaneus and the skin, which could be pushed to one side, when the foot assumed a normal appearance. There were no contractures present.

The superficial reflexes were present, although the plantar reflexes were indefinite in type. No deep reflexes could be elicited.

Mentally the child was not bright. She indicated her wants by signs and speech was limited to a few single words. She spoke her first word at fifteen months.

No other member of the family or relatives has suffered from a similar condition, nor could I get a history of any member suggestive of any of the other types of myopathy.

Since I first saw the patient the progress has been as follows. She first stood up with support at two years and six months. She began to take steps on hands and knees at two years ten months. Just before three years of age she took a few steps on hands and feet.

I saw her in January last and for the first time found the knee jerks (both) present, though I could not elicit any of the other deep reflexes. There is much more resistance encountered now in attempting to make the limbs assume abnormal positions, but the general sensation of flaccidity on palpation seems much the same. She is still unable to stand alone.

Her mentality has only slightly improved. Two and occasionally three words can be put together. Her habits are dirty, although the parents have attempted to train her in this respect.

Treatment has consisted merely of giving a nourishing diet with regular massage.

Comment.

This case illustrates the following points:

- (i.) The presence of extreme muscle hypotonicity.
- (ii.) The absence (in early stages) of deep reflexes.
- (iii.) The absence of familial or hereditary history.
- (iv.) A tendency toward gradual improvement with later the appearance of deep reflexes.

It differs from the usual clinical picture in that mental dullness is present. This mental condition is not familial, as the two previous children are normal and a baby born in January of this year appears physically sound and mentally bright. The pads of tissue (probably fatty in nature) on the heels are also interesting. Some authors have described the hands and feet as being unduly long and narrow; but I have not read of a condition similar to that presented by the feet in this patient.

A CASE OF ACUTE MYELITIS.

By W. PERCY WHITE, M.B., B.S. (Melbourne),
Resident Medical Officer, Perth Hospital,
Western Australia.

Clinical History.

A.H., MALE, aged twenty-six years, was admitted to the Perth Hospital on November 30, 1925.

He complained of pain between shoulder blades at level of sixth dorsal vertebra, his temperature was 37.2° C. (99° F.) and a provisional diagnosis of influenza was made.

Little could be discovered on examination. On the following day he complained of pain in the lower part of the left side of chest. There was slight dullness on percussion at both bases and auscultation revealed diminished breath sounds. He still complained of pain in the back.

On December 2, 1925, pain in the back was more severe. Sputum was small in amount. Microscopical examination revealed neither tubercle bacilli nor pneumococci.

On December 3, 1925, he developed acute retention of urine, which required catheterization and at the same time he complained of a sense of numbness and inability to move his legs.

On December 4, 1925, examination revealed complete flaccid paralysis of both legs with loss of sensation of the right leg up to the level of the middle third of the thigh. There was slight anaesthesia of the left leg and diminished joint sense of both legs. Knee jerks were absent and the plantar reflex was flexor. An area of hyperesthesia at the level of the twelfth dorsal vertebra was found. Pain in the back was still severe. The temperature was slightly elevated and the pulse was good, both in volume and rate.

On December 5, 1925, complete anaesthesia of both legs and abdomen to five centimetres (two inches) above the umbilicus was noted. Complete loss of control of bowels and acute retention of urine occurred. He had spasmodic attacks of pain at intervals, with complete ease between attacks.

On December 6, 1925, the skin over the buttocks began to break.

On December 7, 1925, his condition was unchanged.

On December 8, 1925, he complained of pain in both arms, but there was no loss of power or anaesthesia. Lumbar puncture yielded clear yellow cerebro-spinal fluid, not under increased pressure. Microscopical examination revealed a few red blood corpuscles and a few pus cells. No bacteria were found.

At 11.20 p.m. the temperature began to rise rapidly and the patient became delirious. He died at 3.55 a.m. on December 9 after a short period of unconsciousness. Ten minutes before death the temperature was 42.5° C. (108.6° F.).

Post Mortem Examination.

Post mortem examination revealed suppurative myelitis from the level of the fourth to the sixth dorsal vertebra.

Microscopical examination of the pus revealed streptococci, staphylococci and diplococci. A complement fixation test for syphilis was not done, but the patient denied luetic infection.

Acknowledgment.

I am indebted to Dr. W. Horner Nelson, Honorary Physician to the Perth Hospital, for permission to publish these notes.

CEREBRAL FAT EMBOLISM.

By INGLIS H. COWLING, M.B., B.S. (Melbourne),
Resident Medical Officer, Homœopathic
Hospital, Melbourne.

The patient, R.C., a male, aged thirty-three years, was admitted to the Homœopathic Hospital at 7.30 a.m. on March 1, 1926, after being thrown off his motor bicycle. The position in which he fell was not clear, but he thought he fell mainly on his back giving his head only a slight bump.

On admission he was found to be suffering from shock, abrasions, simple fracture of the right tibia and a (?) fractured right fibula. He was given morphine 0.015 grammes (grain one-quarter) hypodermically, the leg was put up on a back splint and he was sent into the ward. He appeared quite normal otherwise and late that same afternoon his leg was examined by X rays. He was found to have a comminuted fracture of the middle of his right tibia and a fracture just below the neck of the right fibula. At midnight he was given a mixture containing "Aspirin" 0.6 grammes (ten grains) and *liquor morphine* 1.2 cubic centimetres (twenty minims).

Next morning, March 2, 1926, he appeared to be very drowsy and vomited once. On examination his pupils were normally dilated, equal and reacted to light and accommodation. His superficial abdominal reflexes were not elicited and his left knee jerk was abnormally active, the left plantar reflex being extensor in type. The right leg reflexes were not taken. His mouth also was very slightly

asymmetrical. At 4 p.m. a lumbar puncture was done and about five cubic centimetres of cerebro-spinal fluid were removed, the first one to two cubic centimetres under slightly increased pressure. The fluid was quite clear.

On March 3, 1926, he was still comatose, but early that day became restless. Also that morning for the first time there was noticed a large number of petechiae all over the upper part of the chest.

His condition remained the same and he died at 12 o'clock, midday, on March 4, 1926.

His blood pressure and pulse were taken hourly until 1.30 a.m. on March 4, 1926, the former varying between 110 and 130 millimetres of mercury, and the latter between 110 and 130 per minute until the night of March 3, 1926, when the blood pressure rose and reached 140 millimetres of mercury in the morning.

His temperature was 38.9° C. (102° F.) on the evening of admission and gradually fell to 37.6° C. (99.8° F.) on the morning of March 3, 1926; then rose to 39.4° C. (103° F.) that evening and on the morning he died was 39.5° C. (103.2° F.). The urine had a specific gravity of 1020, was acid and was normal on full routine examination.

The body was moved to the morgue pending an inquest and unfortunately a *post mortem* examination was not made.

Morphine idiosyncrasy, cerebral haemorrhage and uræmia were all considered to be excluded by the above observations and the diagnosis of cerebral fat embolism as the cause of death was supported by the petechial development which Corlette⁽¹⁾ considers practically pathognomonic of fat embolism "when taken into consideration in relation to all the other circumstances of the case."

Reference.

⁽¹⁾ C. E. Corlette: "On Cerebral Fat Embolism: Report of a Case with Recovery." THE MEDICAL JOURNAL OF AUSTRALIA, March 7, 1925, page 229.

Reviews.

PSEUDO-SCIENCE.

We have received a copy of a book in its fifth edition. That fact (the author of the book must pardon us for accepting the printed statement as true) should be sufficient guarantee for its value and utility. The title misled us. "The Purpose of Education" seemed to hold out promise of useful information concerning the training of the mind.¹ Instead we find a plethora of words strung together in a manner peculiar to the votaries of so-called experimental psychology. The contents of the book may be described as a mixture of platitude, of meaningless sequences of short and long words and of contradictions. Since lay psychology has become fashionable, the issue of five editions of a book of this kind need scarcely surprise us. Some people will buy every new book on psychology. They may even read all these books and pretend that they understand them. Mr. Fox Pitt is not unusual in damning chemical, physical and mathematical sciences. He doubts everything and questions whether anything can be accepted as a fact. His philosophy refers everything back to the psychic impression of the observer and consequently he defines the term phenomenon as an appearance. If he were consistent no fault could be found in this state of scepticism, for nothing can be proved without some hypothesis. But while he attacks views in chemistry and physics which can be measured, weighed and recorded, he blandly asserts "as a fact" many things that might conceivably be believed, but could never be proved, even after the assumption of several hypotheses. We quote one example: "This done, it may be stated positively as a fact which has been clearly demonstrated that the human personality under a thoroughgoing analysis exhibits not a permanent and unalterably separate entity, but a vast combination or

aggregation of variegated, fluctuating, loosely organized and interdependent physical and psychic phases and potentialities of which no more than a minute fraction makes its presence manifest to our ordinary or 'normal' waking consciousness." He asks his reader to accept his statement that "apperception masses," spirit, soul, will, mind, mood, habit, motive and memory are terms too vague and already discredited to indicate what he chooses to term psychophysical complex. We wonder if for educational purposes he is inclined to challenge the assertion that twice two is four. He argues at one place soundly that all beliefs, laws and conceptions of right and wrong are merely conventions. But in another sentence he writes that the child is born fundamentally good; in another he finds that many learn too late that there is truth in the warning that man cannot serve both God and Mammon. We refrain from quoting some of the matchless strings of words which are supposed to have some bearing on the understanding of the purpose of the education. Instead we venture to express the opinion that the book contains nothing that is of value to the educationalist, that if the premisses on which the arguments are based, are true, they certainly are not founded on what is usually regarded as acceptable evidence and finally that whether these premisses be false or true, the arguments are not rational deductions.

CÆSAREAN SECTION.

FULLNESS of detail, clearness of style, unreservedness of expression characterize Dr. Herbert Spencer's little book on Cæsarean section, which he says has no pretence to be a treatise on Cæsarean section, but is a record as frank as he can make it of his own experience of the operation.¹ His material is one hundred and twenty operations, one hundred of which were performed by him in University College Hospital and ten in private nursing homes. These are set out *seriatim* in a table showing the age of the patient, number and details of previous labours, duration of operation, indication for operation and other useful details. The indications for the operation were contracted pelvis in ninety-eight cases, the true conjugate ranging from 3.75 centimetres (one and a half inches) to 8.1 centimetres (three and a quarter inches), myoma in nine cases, pelvic enchondroma in one, vaginal and uterine cicatrices in three, ventrofixation resulting from a previous myomectomy in one, advanced cancer of the cervix in one, ovarian or parovarian tumour in three, accidental haemorrhage in four.

As regards other "indications" for Cæsarean section, Dr. Spencer considers the operation rarely justified for eclampsia, nor does he view with favour the increasing tendency to operate for *placenta praevia* or accidental haemorrhage, though he concedes its occasional place in the former condition. He points out, however, that in some cases of concealed haemorrhage in which rupture of the membranes and vaginal packing are ineffective, it may be necessary. Again it may be required when bleeding has occurred into the uterine wall, broad ligament or peritoneum. He maintains a conservative attitude as regards operation in the case of advanced age of the mother and in heart disease. The technique is carefully described. Dr. Spencer advocates chloroform till the child is born, "open" ether afterwards and one feels that Dr. Spencer has justified his choice of this method.

For the uterine sutures he uses floss silk boiled for three hours in one in twenty carbolic acid solution and then placed in one in five hundred perchloride of mercury solution for twelve hours, then kept for a fortnight in one in twenty carbolic acid solution. During the operation the sutures lie in a dish of one in forty carbolic acid solution, in which the previously boiled instruments are immersed. He abandoned the use of catgut sutures more than thirty years ago for reasons that will appeal to most operators for Cæsarean section.

¹ "The Purpose of Education: An Examination of Educational Problems in the Light of Recent Scientific Research," by St. George Lane Fox Pitt; Fifth Issue, Revised, 1925. London: Cambridge University Press. Post 8vo, pp. 123. Price: 4s. net.

¹ "Cæsarean Section: With a Table of One Hundred and Twenty Cases," by Herbert R. Spencer, M.D., B.S., F.R.C.P.; 1925. London: John Bale, Sons and Danielsson, Limited. Demy 8vo, pp. 71, with illustrations. Price: 6s. net.

Dr. Spencer deals with the general question of sterilization of the patient after Cæsarean section and is outspoken in his opposition to such a procedure on account of contracted pelvis. He will find all reasonable and experienced operators in agreement with his dictum that "the duty of the obstetrician is to restore the patient as nearly as possible to her previous condition and that is done by conservative Cæsarean section and not by the mutilating operation of hysterectomy, nor by ligaturing or burying the Fallopian tubes."

Of the one hundred and twenty patients operated on, four mothers died, making the maternal mortality 3·3%. All four were infected before operation. The immediate infant mortality was 4·1%. These figures speak for themselves and Dr. Spencer is to be congratulated on his results.

The book, small as it is, covers a wide field. It reflects judgement and an ethical appreciation of ideals that should govern obstetric practice. To say that it has an element of the dogmatic and didactic is to admit that it is written with authority, the authority that may well serve as a corrective of the growing tendency to extend the operation of Cæsarean section beyond its legitimate scope. The introductory chapter on the history of the operation from remote times to the present day is interesting and pleasant reading. To this history Dr. Spencer's little book is a notable contribution. It is text and comment in an appealing form, set down in good faith and should stimulate obstetricians of wide experience to record their results.

A MANUAL ON NURSING.

IN the recently published manual on "Theory and Practice of Nursing" by Miss M. A. Gullan, Sister-Tutor at St. Thomas's Hospital, there appears a summary of the instruction given to the nurses who are trained in the Nightingale School of that hospital.¹ The volume undoubtedly fulfils the claim made for it, that it is a working textbook.

To probationers it will prove a sure guide and instant help during the early part of their career when difficulties are many and great; to experienced nurses the suggestions with which its pages abound, are such as will enable them to improve and perfect their work considerably. Throughout the book the relationship between theory and practice is well illustrated and in no instance better than in the chapters on food and feeding, on digestion and absorption. In these the natural method of nutrition is followed in such a way as to appeal to lay persons which all nurses are when they enter upon their training, for they unlike medical students receive no previous scientific teaching.

The final chapter in which elementary dietetics and the caloric percentage of foods are discussed is in many ways good, but from the point of view of many teachers in Australia the calories said to be needed by an average working man, namely 3,007, are somewhat low. Those said to be needed by an adolescent are placed at about 80% of this figure. American observers, however, very wisely state that the food requirements of rapidly growing boys and girls are greater than those of adults, as energy is needed not only for exercise in play and a certain amount of physical as well as mental work, but also for the making of new tissue.

On the purely technical side the book can be highly commended; the teaching is both ample and good. The chapter entitled "Hints on Private Nursing," is excellent. Attention is therein drawn to the rule that a patient should always be left alone with the doctor for a short space. This rule is unhappily too often honoured in the breach than in the observance; numbers of cases might be cited where neglect of this simple point of etiquette has led to grave dissatisfaction not only with the nurse but also with the medical attendant.

The literary merit of the book is considerable. It is easy and pleasant to read, the language is well chosen and the directions given are clearly expressed.

¹ "Theory and Practice of Nursing," by M. A. Gullan; Second Edition; 1925. London: H. K. Lewis and Company, Limited. Demy 8vo., pp. 250. Price: 9s. net.

Blank pages have been interleaved at frequent intervals upon which notes can be made and records of observations kept and thus a much enhanced value be given to the book.

The manual is one which should find a place on the shelves of all who are interested in nursing.

TUMOURS.

THE second edition of Kettle's "Pathology of Tumours" was long past due, but it is particularly welcome at the present time, when interest in the subject is running high and authoritative statement is obtainable chiefly in tomes of repellent size or in papers relatively difficult of access.¹ As a manual for students it has no rivals and the plan of the book to present "the generally accepted teaching on the pathology of tumours without the mass of detail proper in a more ambitious work of reference," will commend itself to many who desire to get their bearings in the subject.

With the addition of sixty-five pages and by economy of space in printing room has been found for thirty-three new figures and much fresh subject matter, while several sections have been entirely rewritten. Comparison with the earlier edition provides an interesting revelation of the development of "accepted" opinion on the pathology of tumours and of the reality and success of the determined assault that has been made on the problem of tumour growth.

In the aetiological section the paragraph on the relationship of civilization to cancer is much expanded and should act as a salutary corrective to the speciously attractive but wildly unscientific statements that have obtained currency of late. The inspiring record of the experimental study of cancer in recent years is given due prominence and careful statement. Perhaps the author's conclusion with regard to Gye's work that "the parasitic nature of, at any rate, one form of malignant growth would seem to be proved" suffers slightly from nearness to the event. Radiologists will note that so great an authority as Kettle is critical of the curative efficacy of any treatment save excision.

He rightly condemns the nomenclature of the myelomalignant sarcoma group of tumours and has greatly improved his treatment of the subject, but it is unfortunate that the confusion should be allowed to persist in the legend of some of the illustrations and even in one place in the text. The same fault is noticeable in the revised section on the parotid tumour, for while an epithelial origin is supported in the text, "endothelioma" still describes the illustration. The section on the endotheliomata contains a useful examination of the criteria of diagnosis of such tumours, virtually a protest against the indiscriminate use of the name for tumours whose chief qualification is that they fail to fit readily into other well-defined groups and in strict accord is the omission of the fourth subsection of the first edition, "endotheliomata growing in other situations," whose contents are more advantageously dealt with elsewhere in the book.

There is a most welcome paragraph on polymorphism in carcinomata which calls attention to important facts too often lost sight of and is supported by admirable illustrations. The amendment of the nomenclature of the neuromata and the whole treatment of the subject constitutes a notable advance on that of the first edition. The space allotted to special pathology is small, but necessarily so in accordance with the design of the book. There can be no complaint of the matter.

The fact that there are one hundred and fifty-nine illustrations of admirably selected material in two hundred and seventy-six pages adds enormously to the value of the work. The reproductions of drawings and photographs are of a high technical standard and the paper and printing leave little to be desired.

The whole book is excellent in conception and execution and heartily to be recommended.

¹ "The Pathology of Tumours," by E. H. Kettle, M.D., B.S. (London); Second Edition; 1925. London: H. K. Lewis and Company, Limited. Demy 8vo., pp. 292, with illustrations. Price: 12s. 6d. net.

The Medical Journal of Australia

SATURDAY, JULY 3, 1926.

The Dunedin Congress.

WITH experience, hard work and some ingenuity a successful congress can be organized in any part of the world, provided that a sufficient number of persons will take an active interest in it. The degree of success of congresses like the International Congress of Medicine depends primarily on the organizing ability, breadth of vision and temper of the general secretary to withstand the strain during a period of extreme rush. There are, however, circumstances which render the preparation of a congress a task of superlative difficulty. First and foremost those who undertake to provide the material, must have real messages to deliver. At some meetings the papers read are little more than parrot messages, rehashes of the work of other men, boasting reminders of the existence of unimportant self-advertisers. In Australasia this kind of meeting does not take place. In the medical world we have scientists whose work is sound, original and worthy of close attention. These men and women can be relied on to maintain the high standard of the congresses in this quarter of the globe. In the second place there must be a relatively large list of members. Scientists will not waste their time by reading papers to a handful of listeners. It is more profitable to write the paper and have it published in a journal with a wide circulation. A long list of names also means a substantial treasury. Congresses cost money to the organizers as well as to the participants. It is this difficulty that is felt in Australia. While a session of the Australasian Medical Congress (British Medical Association) held in Sydney or Melbourne is assured of reasonable financial support, the same cannot be said of a session held in cities like Dunedin, Hobart or Perth. The burden imposed on the local members in respect of entertainment and voluntary work need not detain us; it is usually borne with cheerful willingness and a sense of pride. The other expenses of the session have to

be defrayed out of the common fund provided by the subscription of members. If a session is badly attended, the executive committee is handicapped and it may be actually prevented from carrying out the whole of the programme.

At the present time Professor D. W. Carmalt Jones, the Honorary Treasurer of the second session of Congress, is in Australia for the purpose of discussing the scientific programmes of the sections with the office bearers in the several States. He has pointed out that the members in New Zealand look to Australia to provide a large contingent of members. In all modesty the Executive Committee in Dunedin aim at a membership roll of about five hundred. It will be possible to carry out the programme with the aid of the subscriptions of this relatively small number of members. We realize that the journey to New Zealand is expensive both in time and money and that many members who would not hesitate to join a session in one of the eastern States of Australia, will not be prepared to make the sacrifice in time and money to attend the session in Dunedin. But there must be very many to whom this double sacrifice is not great. It is suggested that all who can possibly do so, should make an effort to attend. They will reap a rich harvest, not only of scientific value, but also of social and cultural enjoyment. We would urge all members of the British Medical Association in Australia to join at once by filling in the application form printed in another part of this issue and sending it together with a cheque for two guineas to the local honorary secretaries. If at a later date, they should find that they are unable to attend the session, they would have the satisfaction of knowing that they have contributed to the success of the meeting. It is proposed to publish the Transactions of Congress in a series of supplements to *THE MEDICAL JOURNAL OF AUSTRALIA*. The Transactions will thus be available to all members of the British Medical Association in Australia. Those who cannot attend, should recognize the benefit that they will derive and place their names voluntarily on the list.

The preparation is being handled with skill, foresight and judgement. The scientific work will be of a very fine order. Our New Zealand colleagues

have the ability to deliver valuable messages, while the Australian members will not fail in their contributions. Medicine will gain by this meeting if the medical profession in Australia is prepared to shoulder its due responsibility. A successful congress will further be the means of strengthening the bond between the Commonwealth and the Dominion, a bond that should be of iron. We claim that these are sufficient arguments to impel large numbers of practitioners in Australia to join the Congress without delay.

Current Comment.

THYREOID METASTASIS.

THE question of thyreoid metastasis has been discussed on a previous occasion in this journal. In March, 1925, reference was made to the work of Bell which was concerned with the so-called benign metastatic tumours of the thyreoid gland. It will be remembered that the thyreoid alone of all organs in the body has been regarded as being endowed with the power of forming metastatic tumours which are non-malignant in nature. This view is obviously directly opposed to the commonly accepted teaching in regard to malignant disease and it owes its origin primarily to observations made many years ago by Cohnheim. Cohnheim's patient was a woman of thirty-five years of age. Abscesses in the knee joint and sacro-iliac region were opened and the latter communicated with the bone; emaciation and death soon followed and on *post mortem* examination nodules were found scattered throughout the lungs, bones and other parts of the body. The structure of these nodules and of the thyreoid tissue was that of simple colloid adenoma. In one place button-like masses projected into the inferior thyreoid vein. A few of the thyreoid follicles were completely filled with epithelial nests. Bell pointed out that great histological variations were found in metastatic thyreoid tumours. According to him an embryonic structure forms the basal type and this may either develop towards normal structure or assume frankly malignant characters. This normal appearance of the metastases is the chief point around which all claims to benignity of the deposits have centred. Bell also emphasized the fact that malignant changes in a thyreoid gland may be so minute that they may readily be missed. Another factor which in all probability has a bearing on this subject is the sinusoidal character of the circulation of the thyreoid gland. This was described recently in this journal in connexion with the work of Williamson and Pearse.

This subject has recently been discussed by Dr. Walter M. Simpson.¹ In his opening remarks Dr. Simpson points out that multiple metastases have

long been regarded as *prima facie* evidence of malignant disease. He holds, therefore, that the statement that metastases of thyreoid tissue do not conform to this fundamental principle at once places a heavy burden of proof on those who suggest such a possibility. He refers to the statement of Joll in a lecture before the Royal College of Surgeons of England that the thyreoid may be normal in every way and that the metastasis may have the structure of either normal thyreoid tissue, of an innocent thyreoid tumour or of a tumour exhibiting any degree of malignancy. In his opinion Cohnheim's case offers three important pieces of evidence in favour of its malignant nature. These are the multiple metastases, the tumour thrombosis in the inferior thyreoid vein and the proliferating cell nests in the thyreoid acini. If, as has been done, the view that thyreoid metastases may be due to ectopic thyreoid *Anlagen* be seriously entertained, it must be remembered that it has been firmly established that aberrant thyreoid tissue is always found in the middle line from the *foramen caecum* of the tongue to the arch of the aorta as derivatives from the thyreoglossal duct or as lateral remnants of tissue of the branchial cleft. There is one exception to this rule and this is found in the teratomata. Dr. Simpson has records of six cases of dermoid cysts of the ovary which contained amongst other tissues mature thyreoid tissue. In two of these the thyreoid mass was as large as an orange. The claim by some authors that aberrant thyreoid tissue may be the source of thyreoid new growths in the mandible, sternum and clavicle is in Dr. Simpson's opinion rendered untenable by the fact that in the seventy-seven cases analysed by him the skull was involved thirty times, the vertebrae in twenty-five instances, while the clavicle and sternum were involved in nine cases and the mandible but twice. Moreover, when the clavicle and sternum were involved, other bones in the body were also the seat of metastatic deposits.

In our previous discussion of this subject attention was drawn to the fact that if a primary malignant focus in the thyreoid gland were to be excluded with certainty, it would be essential to subject the gland to most searching scrutiny. In actual fact nothing short of the results of adequate examination of serial sections of the organ can be regarded as offering proof of the absence of malignant change. Even in such circumstances areas will certainly be found which will present difficulty to the most experienced observer. While Dr. Simpson does not go as far as this, he draws attention to the inadequate study to which the seventy-seven cases analysed by him have been subjected. He rightly regards this neglect as the most convincing argument against the existence of benign metastases. In twenty-nine cases only of the seventy-seven was tissue from the thyreoid gland subjected to microscopical examination. It is still the custom in many laboratories to examine as a routine but one or two sections. It is obvious that conclusions based on such observations are invalid. Dr. Simpson points out that a small primary malignant adenoma or area of adenocarcinoma, the size of a pea, may

¹ *Surgery, Gynecology and Obstetrics*, April, 1926.

be hidden deeply in a thyreoid gland of innocent appearance and yet give rise to extensive osseous and visceral metastases. In a case reported by Huguenin it was only after repeated search that a small, whitish area measuring four by five millimetres and composed entirely of carcinoma cells was discovered in the inferior pole of the left lobe of the thyreoid gland. Another astounding fact in connexion with Dr. Simpson's analysis is his discovery that only in one-third of the seventy-seven so-called benign cases was *post mortem* examination carried out. In the majority of instances a report was made on the benign nature of the tumour shortly after its discovery. Thus in 1908 Alamartine and Jaboulay reported a benign thyreoid metastasis in the humerus of a woman, twenty-three years of age. In 1911 Alamartine and Bonnet made a further report on the same case. Multiple metastases had occurred in the right femur and the vertebrae and death had followed.

All writers on the subject have laid emphasis on the normal appearance of the cell in thyreoid deposits. Dr. Simpson has reported three cases which came under his own observation. They show that malignant disease of the thyreoid may be accompanied by metastases whose cells have a benign appearance. In all three of his cases the metastases were composed of apparently normal thyreoid tissue. In all three death occurred from unquestionable malignant disease of the thyreoid; in only one of the three was the malignant nature of a thyreoid tumour demonstrated under the microscope. In five cases in his series of seventy-seven were normal thyreoid metastases associated with malignant disease of the thyreoid proved to be so by microscopical examination. In this connexion it is interesting to revert to the view expressed by Bell that an embryonic structure forms the basal type of thyreoid deposits and that the cells may either develop a normal appearance or assume malignant characters.

Consideration of this subject leads to two important conclusions. In the first place Dr. Simpson is probably justified in his conclusion that there is no such entity as a "benign metastasizing goitre" and that the use of the term should be abandoned. Secondly it serves to emphasize the importance of careful and complete *post mortem* examination, both macroscopical and microscopical.

CONGENITAL ENLARGEMENT OF A LIMB.

In October, 1925, Bell and Inglis reported in this journal a case of congenital tumour of the left upper limb. The patient, a man, aged fifty-four years, was born with a large left upper limb. His thumb, index and middle fingers were removed by surgical operation when he was an infant. When Bell and Inglis investigated the man's condition the limb was greatly enlarged. The swelling seemed to be composed mainly of adipose tissue, apparently involving the whole arm. An irregular cord-like structure, resembling a flexiform neuroma in appearance, was present on the forearm. On X ray examination a periosteal deposit was found on the lower end of

the humerus. Inglis regarded this deposit as possibly being chondromatous in nature. He held that the condition was not one of partial gigantism. No naevus was present and no enlargement of the bones on X ray examination was reported. It was held that the condition was possibly one of neurofibromatosis or plexiform neuroma.

Those interested in the case reported by Bell and Inglis will find material worthy of notice in two recent communications by Dr. E. G. Wakefield¹ and Dr. E. D. Fenner.² The former records the condition of a male patient whose left arm at birth was larger than the right. Naevus of the arm, hand and shoulder was present from birth. The thorax was somewhat larger on the left side. On X ray examination uniform hypertrophy of the bones was found, the circumference being from a quarter to one cubic centimetre greater than that on the right side. The case reported by Dr. Fenner is that of a girl, aged seven years, whose left lower limb was about 12·5 centimetres longer than the right and about twice as large. No naevus was present. X ray examination revealed uniform gigantism of the bones of the left lower extremity, together with evidence of a low grade periostitis of the left tibia. Over the lower half of the left tibia there was a tumour attached to the bone. This had grown rapidly after the patient had received an injury at this point. After exploratory incision a diagnosis of fibrosarcoma was made after microscopical examination of the specimen had been carried out.

At first sight it might appear that the cases reported by Dr. Wakefield and Dr. Fenner are similar to that of Bell and Inglis. Inglis stated definitely that his patient's condition was not one of partial gigantism. At the same time no reason was given for the amputation of the patient's fingers during infancy. The osseous lesions in Dr. Fenner's patient are of interest when compared with those in Bell and Inglis's patient. It is interesting to note, moreover, that Dr. Wakefield refers to a case reported by Campbell in which hemihypertrophy was associated with neurofibromatosis, a combination of the condition found in the three patients here reviewed.

Many hypotheses have been advanced in explanation of congenital hypertrophy. These are referred to by Dr. Wakefield and Dr. Fenner. Almost every conceivable possibility has been suggested. Amongst these are a disturbance in the lymphatic system bearing a resemblance to elephantiasis, trophic disturbance, vasomotor paralysis, arrested development of the several coats of the arteries, intrauterine meningitis, faulty development of the spinal cord and enlargement of one side of the cerebrum, endocrine disturbances and a deviation in the normal process of twinning. According to Dr. Wakefield the last named hypothesis, advanced by Gessell, is regarded at the present time as the most likely cause. He pertinently asks the question: "Is not the plausibility of this theory merely due to our gross ignorance of what really constitutes 'normal twinning'?"

¹ *The American Journal of the Medical Sciences*, April, 1926.
² *Medical Journal and Record*, April 21, 1926.

Abstracts from Current Medical Literature.

DERMATOLOGY.

The Treatment of Purpura Hæmorrhagica.

T. FITZ-HUGH (*The Atlantic Medical Journal*, April, 1926) discusses the subject of *purpura hemorrhagica* with special reference to the blood picture and treatment of this disease. He gives the following characteristics as a basis for its differentiation from other hæmorrhagic conditions: (i.) A condition of thrombocytopenia or subnormal platelet content; (ii.) prolongation of the bleeding time; (iii.) subnormal reactivity of the blood clot, though the clotting time itself is normal; (iv.) a lack of normal capillary resistance resulting in a response to what is called a tourniquet test. He states that accurate platelet counting is necessary for an opinion on progress and cure, as a patient who is only apparently cured, will still have a thrombocytopenia. The modern additions to treatment include blood transfusions, protein shock, X ray treatment of the spleen and splenectomy. Blood transfusion he describes as the most valuable emergency method available. Included under the heading of protein shock are mentioned intramuscular injections of horse serum, milk coagulose and human blood. In the author's opinion these are not so valuable as repeated blood transfusions especially in the acute form of the disease. Splenectomy is described as the best method at the present time in cases that are not of an acute fulminating type. In view of the good results of splenectomy the author is of the opinion that massive doses of X rays over the spleen should be first tried. His own results along this line of treatment, whilst encouraging, are in his opinion too recent to warrant any definite statement.

Ringworm of the Scalp in an Adult.

HOWARD FOX (*Archives of Dermatology and Syphilology*, March, 1926) reports a case of scalp ringworm in an adult. He states that he has been able to find only fifty-three such cases reported in the literature. The lesion although a kerion was caused by the *Microsporon andonini*.

Erysipeloid and Swine Erysipelas in Man.

J. V. KLAUDER (*Journal of the American Medical Association*, February, 1926) discusses the possible relationship of erysipeloid of Rosenbach to swine erysipelas in man. He describes the incidence of erysipeloid in cooks, kitchen workers, butchers and those who handle fish and game. Whilst he admits the greater severity of the general symptoms and the glandular involvement in swine erysipelas, he points out the resemblance of the local lesions with their reddish violaceous appearance. In addition the

organisms (Gram-positive bacilli) identified in both diseases are regarded as the same, differing only as to virulence. This view also is held by German observers who found that agglutination tests with serum from all patients, conducted separately, with cultures of the bacillus of swine erysipelas yielded positive results.

Large Spored Ringworm Infection.

M. ENGMAN (*Archives of Dermatology and Syphilology*, March, 1926) reports the successful treatment of large spored ringworm conditions in the scalp and beard regions by the intravenous injection of foreign protein. A suspension of *Bacillus typhosus* was used. An increase of temperature and pronounced general symptoms resulted. In children a dose of twenty-five million bacilli was given to start with and this was increased by twenty or twenty-five millions until one hundred or one hundred and fifty million bacilli were given. The injections were made at intervals of one week. In the case of male adults with the beard region affected larger doses were used. Owing to the severe general reaction the patient's condition must be good before this treatment is applied. No improvement was noted in small spored ringworm infections.

Lichen Nitidus.

H. W. BARBER (*The British Journal of Dermatology and Syphilis*, April, 1926) in a paper on *lichen nitidus* gives a résumé of the literature of this affection and a description of his own cases. He lays special emphasis on the occurrence of a generalized form of the disease and states that Circette in 1911 and later Chatellier may claim to have given the first accurate clinical description of the confluent type of the eruption. He describes the elementary lesion as a minute papule of a glistening appearance, ranging in colour from the ordinary skin tint to a reddish-brown or reddish-yellow. In the restricted form it occurs chiefly on the penis, groins, lower part of the abdomen, wrists and forearms. When it is diffuse, the flexures are most often attacked and the eruption may resemble patches of lichenification. There is occasionally some scaliness with a psoriasisiform appearance in the confluent areas. One patient manifested a remarkable hyperkeratosis of the hands and feet. Histologically the papule is a small tubercle or granuloma underneath the epidermis but sometimes jutting into it. In some cases prolongation of the epidermis downwards may completely surround the granuloma. This has been thought to be pathognomonic of *lichen nitidus*. The granuloma contains small round cells, epithelioid cells and giant cells. No tubercle bacilli have been found. Discussing the aetiology the author disagrees with many writers and does not consider that there is sufficient evidence to class this condition amongst the tuberculides. Some cases, however, manifested definite evidence of tuberculosis at the time of the appearance of the

rash. Treatment in these cases was not very satisfactory. Fractional doses of X rays gave no apparent benefit. Lugol's solution appeared to be of considerable value in some cases.

"Mercurochrome—220 Soluble" in Skin Diseases.

H. H. YOUNG, J. H. HILL AND W. L. DENNY (*Archives of Dermatology and Syphilology*, April, 1926) reported in a previous paper the value of "Mercurochrome" in scarlet fever and septicaemia and have now given the analysis of its application to one hundred varied skin conditions. The conditions treated and the results obtained are as follows: Twenty-four patients suffering from erysipelas were treated, twenty were cured or greatly improved. Eleven suffering from furunculosis were treated, ten were cured and one was greatly improved. Four patients suffering from chancroidal ulceration were treated, the lesions of all healed rapidly. Thirty-six patients suffering from cellulitis and abscesses were treated, twenty-one recovered promptly and nine improved. Three patients suffering from miscellaneous gangrenous affections were treated and all recovered. Three patients suffering from pemphigus were treated, two recovered and one suffered from a relapse. Four patients suffering from psoriasis were treated and the condition of one relapsed. The lesion of one patient who was suffering from tertiary syphilis, disappeared. Forty-four suffering from leprosy were treated, twenty-eight improved and their lesions disappeared. It has been found that in doses up to five milligrammes per kilogram of body weight "Mercurochrome" may be given by the intravenous route practically without any danger of serious results. High fever, gastrointestinal disturbances, occasionally severe stomatitis, more rarely albuminuria and casts may occur. It is advisable to begin with small doses, two milligrammes per kilogram of weight, and to increase the dose, giving up to four or six doses.

RADIOLOGY.

Pulmonary Tuberculosis.

L. KUPFERER (*British Journal of Radiology*, B.I.R. Section, November 1925) discusses the X ray picture in pulmonary tuberculosis. According to Virchow there are two forms of reaction in pulmonary tuberculosis, firstly productive, where there is a real tubercle or a more or less well-circumscribed focus consisting of tuberculous granulation tissue and secondly exudative, where the reaction chiefly consists of liquid substances mixed with a few cellular elements. This second form begins in the acinus and soon fills large parts of the lung and is a lobular focus in contrast to the nodular focus in the productive form. In X ray pictures the productive reaction is shown in well-circum-

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scribed shadows of different size and separate from each other. The exudative reaction produces diffuse shadows which gradually grow brighter at the periphery and look like the shadows seen in broncho-pneumonia. Induration and fibrosis later occur with scarring. Cavities can usually be easily demonstrated, but with much scar tissue around such demonstration may be difficult. The prognosis in the exudative form is more grave than in the nodular productive form. Onset of fibrosis is a favourable sign.

Cancer of the Colon.

H. W. CARSON (*Canadian Medical Association Journal*, October, 1925) considers the diagnosis and treatment of cancer of the colon. He refers to the symptoms usually met with: Constipation, loss of weight, anaemia and disinclination for exertion. A feeling of weight after an evacuation as if the bowel were incompletely emptied is a frequent complaint. Distension of the caecum is a fairly common concomitant with colicky pains over the caecum. Palpation frequently produces active caecal peristalsis and the caecum may be felt under the hand, while rectal examination may be of help. Occult blood is often found and sigmoidoscopic examination is frequently of value. Radiographic examination after an opaque enema is of the greatest help and is better than the usual meal examination as the enema may be watched as it fills the colon and any area of obstruction or irregularity demonstrated. Careful preliminary preparation is necessary. Castor oil is given thirty-six hours before examination and the colon washed out the night before and on the morning of the examination. In 30% of normal cases there is spasm at the junction of the iliac and pelvic colons, but this soon passes off. The whole colon should be filled as far as the caecum. In obstruction from growth the enema is held up and then gradually trickles through the affected area. The enema will pass through to the ileum in 50% of cases. Palpation under the screen will prevent errors in cases of spasm or in cases in which "air-locks" occur.

"Lipiodol" in Lung Lesions.

DAVID H. BALLON contributes an article on the injection of "Lipiodol" as an aid in the X ray diagnosis of broncho-pulmonary lesions including tuberculosis (*Canadian Medical Association Journal*, October, 1925). The technique is that of bronchoscopy with local anaesthesia and the trachea is anaesthetized with a solution of one part of a 20% solution of cocaine and two parts of a one in a thousand solution of adrenalin chloride. Then ten to thirty cubic centimetres of warmed "Lipiodol" are injected into one or both lungs with long bronchoscopic tube, the bronchoscope is withdrawn and skiagrams are taken in the antero-posterior, right and left lateral directions and with the patient in the inverted and sitting positions. Stereoscopic plates are also made.

Coughing will disseminate the "Lipiodol" widely even to the apices. The "Lipiodol" is well borne and causes no ill after effects. This method is of particular use in outlining abscesses, bronchiectasis, empyema communicating with a bronchus, new growth and other conditions. Reproductions of a series of skiagrams illustrate this article.

Recto-Colonic Diagnosis.

J. F. MONTAGUE (*Medical Journal and Record*, December 2, 1925) writes on the value of the X ray examination in the diagnosis of recto-colonic diseases. This type of examination is quite as valuable as the recto-sigmoidoscopic examinations. Barium enemas are necessary for examination of the large bowel; fluoroscopic and plate examinations are both to be employed. The author considers that every case of haemorrhoids occurring in persons over thirty years of age and every case of chronic constipation should be investigated by the opaque enema. Suddenly developing constipation, obscure bowel hemorrhages, *pruritus ani* and all forms of polyposis should also be investigated by this method. Diverticulitis of the sigmoid is not an uncommon lesion and is frequently diagnosed as new growth and yields readily to treatment when recognized.

Intratumoral Irradiation.

G. FAILLA describes a new method for the irradiation of tumours by burying radium in their substance (*British Journal of Radiology*, B.I.R. Section, November, 1925). The two methods usually employed are burying metallic needles containing radium in the tumour and embedding glass tubes containing radium in the tumour. The first is the "radium needle method" and the second the "bare tube method." The author seals his radium in gold tubes and a considerable amount can be placed in a tube 5.0 millimetres by 0.2 millimetre internal diameter with a wall thickness of 0.2 millimetre. Improved results have followed the use of these gold tubes.

General Indications for Radio-Therapy.

L. J. FRIEDMAN (*Medical Journal and Record*, December 2, 1925) discusses the general indications for X ray and radium therapy. In diagnostic use X rays are quite safe as now employed, but in therapy their promiscuous use is liable to end in disaster. An intimate knowledge of the physical properties of X rays and radium is necessary and also a good knowledge of pathology. Various tissues have various degrees of resistance to radiation. As a general rule the more fibrous the growth, the more resistant and the more cellular the growth, the less resistant. Embryonal cells are more susceptible than mature adult cells. Radiation may retard mitosis and enhance normal metabolism, it may augment retrogressive action (for example enlarged

thymus and adenopathy) and it may produce nuclear destruction (for example neoplasms). Before any treatment is undertaken microscopical examination of a section should be made. Careful determination of the extent of a lesion is necessary in order that the dosage and amount of filtration may be fixed. The author recommends preoperative and postoperative radiation in cases in which the neoplasm can be removed.

Cranial Fracture Union.

W. H. STEWART (*British Journal of Radiology*, B.I.R. Section, November, 1925) writes on the time factor in the disappearance of skiagraphic evidence of fracture of the skull. In fractures of flat bones union is a slow process. In the cranial bone fractures there is very little callus formation; the connective tissue binding the fragments together gradually changes to an osteoid material which later becomes true bone and until such union has occurred the fracture line can be demonstrated. A positive statement as to the length of time for union is not possible. Simple fissure fractures of the vault without comminution heal more quickly and may show no signs after six or eight months in children, but in adults a linear fracture may be visible up to three years. Where there has been much separation of fragments the fracture may be demonstrated up to five years. Fractures of the occipital bone unite more slowly than fractures elsewhere. Comminuted fractures, especially when depressed, probably never become obliterated.

Skin Cancer.

E. M. DALAND (*Journal of the American Medical Association*, February 13, 1926) describes the effect of radium treatment in two hundred and sixty-five cases of skin cancer with reports of the end results in two hundred and three cases. The conditions varied from a keratosis just becoming malignant to extensive lesions involving the deep structures. It is difficult to get patients to continue treatment after the gross lesion is destroyed and as the average age of patients was 60.8 years, many died from intercurrent maladies and only seventy-eight patients could be followed up for five years. Only 29% were outdoor workers which is rather contrary to the general belief that skin cancer is a disease of outdoor life. Snippings were taken only occasionally for microscopical examination, as both snipping and curettage are not looked upon as good therapy by the author. Results comprise 62.5% of cures after years with a further 4.4% by operation following radium. The best method of treatment is to destroy the gross lesion by the insertion of one millicurie radium emanation seeds, one to each cubic centimetre of tissue. Emanation tubes in steel jackets should then be used to destroy any remaining growths, from twelve and a half to fifteen millicurie hours to an area the tubes not being nearer to each other than one centimetre.

British Medical Association News.

SCIENTIFIC.

A MEETING OF THE VICTORIAN BRANCH OF THE BRITISH MEDICAL ASSOCIATION was held at the Medical Society Hall, East Melbourne, on May 5, 1926, Dr. H. DOUGLAS STEPHENS, the President, in the chair.

Heterodoxy.

DR. A. E. TAYLOR read a paper entitled: "Some Heterodox Opinions" (see page 1).

DR. A. V. M. ANDERSON said that it appeared from his paper that Dr. Taylor was not so heterodox in his views as the title of his paper suggested. This was so at any rate as far as the sections on sunstroke and vaccine therapy were concerned. He was not prepared to discuss the section of the paper dealing with the so-called deficiency diseases.

He agreed that the number of genuine instances of sunstroke among the number of cases so diagnosed was very small; sunstroke was a common error in diagnosis. He had been interested in Dr. Taylor's discussion of alcoholism in relation to so-called sunstroke and had himself observed hyperpyrexia in the course of *delirium tremens*. That the use of vaccines in treatment was disappointing in its attendant results was the opinion of many medical men. He did not employ them nearly so much as had formerly been his practice. He still retained *Bacillus coli* vaccine in the treatment of rheumatoid arthritis, but was of opinion that it was not so potent a remedial agent as were measures directed towards the eradication of septic foci and physiotherapy. Dr. Taylor was to be congratulated on his courage in putting forward views contrary to those commonly held; advance very often depended on the formulation of "heterodox" opinions.

DR. J. NEWMAN MORRIS said that he thought that Dr. Taylor would not be inundated, as he anticipated, with instances of the successful use of vaccines. His own view and as far as he could estimate it was that of many others, was that therapeutic vaccines were of little avail, although there was a field for vaccines in prophylaxis. He agreed that the diagnosis of sunstroke was commonly made erroneously. Dr. Taylor had drawn an analogy between sunstroke and infantile convulsions and on it had based a practice of irrigating the bowel in the treatment of sunstroke. He did not consider that such lavage was necessary as a routine, but thought that the administration of aperients was generally a sufficient measure. Dr. Taylor had performed a service in reminding them that they were not obliged to accept views merely because they were orthodox and his paper would stimulate their critical faculties.

DR. H. DOUGLAS STEPHENS said that he found most of the heterodoxy in Dr. Taylor's paper in his discussion of rickets, scurvy and beri-beri. If digestive disorder were the basis of scurvy, why was not the disease more prevalent? Infantile scurvy was very rarely observed, although before the war it occurred commonly. At that period also the majority of the infants affected were fed on a certain patent food; in fact he had seen more scurvy among infants taking this food than in all the rest of artificially fed babies put together. He did not understand why this should be so, but during the war supplies of the food to which he had referred, ceased and he connected the fall in the incidence of scurvy with the withdrawal of the food.

Dr. Taylor had mentioned that the beneficial effect from the administration of cod liver oil in rickets was sometimes delayed. That this was so was due to the fact that the antirachitic vitamin content of cod liver oil varied in different samples, being dependent on the time of the year at which the fish were caught. The antirachitic factor diminished also if the oil were kept too long or exposed to light.

DR. REGINALD WEBSTER said that he did not consider that Dr. Taylor had given a fair presentation of the subject of

vaccine therapy. It appeared to him to consist of a sweeping condemnation, couched in somewhat intemperate terms and a summary dismissal of all claims to good results as based on faulty observation. Very frequently the faulty observation lay in estimating the indication for vaccine treatment and as a result the vaccine was expected to remove mountains. Dr. Taylor would have been more convincing on the subject of vaccines had he been more dispassionate.

DR. TAYLOR, in reply, expressed his thanks to the contributors to the discussion. Dr. Morris had apparently misunderstood him in the matter of the treatment of infantile convulsions. He did not adopt lavage of the colon as a routine measure, but resorted to it when the classical hot bath and usual procedures failed. He considered that instances of genuine sunstroke were very rare, but when it did occur the patient was desperately ill. His chief objection to vaccine treatment was theoretical, but he was ready to accept any evidence brought forward in its favour.

Normal Labour.

DR. MARY DE GARIS read a paper entitled: "The Application of the New Definition of Labour to the Clinical Study of Obstetrics: A New Outlook on Midwifery" (see page 6).

DR. A. E. TAYLOR said that he had noted that Dr. De Garis had urged that practitioners should make greater use of endocrine preparations. It was necessary, however, that they should be quite clear as to what effects were to be anticipated. In his opinion no endocrine preparation, except extract of the thyroid gland, was any good when given orally and the necessity for repeated hypodermic injections was a great disadvantage.

DR. JAMES BOOTH said that the Branch was indebted to Dr. De Garis for her paper. The subject was very important and in his opinion the proper adjustment of the diet would go further in the direction of ameliorating labour than any other single measure. In this connexion members would be well advised to read an article by Professor Mellanby which appeared in *The British Medical Journal* of March 20, 1926.

DR. BOOTH referred to a book "Tocology" as widely read by the laity and therefore demanding attention from the medical profession. In the book the author prescribed a diet as appropriate for women during pregnancy and claimed great success in reducing pain in parturition. While much of the book was perhaps to be taken *cum grano salis*, books of this type which had caught the popular mind should be examined by medical practitioners. With reference to the use of endocrine products Dr. Booth said that he had been pleased with the results attending the use of "Mammogen" in agalactia; the preparation was unfortunately expensive.

DR. F. L. DAVIES said that he would require to read Dr. De Garis's paper before offering general criticism. She had made one statement, however, which appeared to him to be open to question. She had described rigidity of the vaginal muscles as due to a visceromotor reflex and as persisting under anaesthesia. He doubted this view. Anaesthesia unless extremely light would abolish uterine contractions and therefore should dispose of vaginal rigidity.

DR. CLIVE HARCOOT agreed that in most instances of difficult labour there was a basis of uterine inertia. He always dreaded those cases in which though the head was low, the cervix remained undilated. In such circumstances the labour was invariably prolonged and difficult. On the other hand exceedingly rapid labours were not always painless, the pains in some cases being very severe while they lasted.

DR. ADA GRIFFITHS said that there must be a cause underlying rapid and easy labour and the very great variation which was observed in the process of parturition. It was notable that in Gippsland, Victoria, where there was abundance of green feed all the year round, no difficulty in parturition was experienced by mares. On the other hand in northern Victoria, at those periods when green feed was very scarce, labour in mares was often difficult and attended by loss of foals. It behoved them to elucidate the

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causes which operated in producing such tremendous variation in the facility of parturition in women.

Dr. De Garis in reply reminded members that she had written a book the theme of which was a detailed consideration of the subject of painless labour. She outlined the six sections of the book. The starting point was a new definition of normal labour and a new conception of uterine inertia. She urged the adoption of a new outlook and as objective what was known not to be impossible, painless labour. As long as the average labour was taken as the standard there would be no advances.

She had suggested the use of endocrine preparations, but had not stopped to discuss them. It was common to see pregnant women exhibiting a certain degree of thyroïd enlargement and dryness of the skin; to such she administered thyroïd extract and small doses of the syrup of hydriodic acid. She did not agree that thyroïd extract was the only endocrine product which was effective when given orally, but had obtained satisfactory results with extract of parathyreoid gland and "Pituitrin," not especially in midwifery, but in general work.

She did not consider that any of the textbooks gave a proper discussion of the physiology of the uterus and firmly believed that, as in the case of the cardiac muscle, there were several separable functions of uterine muscle.

A MEETING OF THE VICTORIAN BRANCH OF THE BRITISH MEDICAL ASSOCIATION was held at the Melbourne Hospital on May 28, 1926. The meeting took the form of a series of clinical demonstrations by members of the honorary staff.

Multiple Cerebral Tumours.

Dr. S. V. SEWELL presented a young man, aged nineteen years, who had first suffered from Jacksonian fits twelve years previously. The seizures affected the right side of the face, the right arm and the right leg and were accompanied by severe headache and vomiting. The patient was apparently quite well between the attacks.

Operation had been undertaken on April 5, 1916, when in trephining the skull on the left side it had been found that the bone was very thin and of "egg-shell" quality. An irregularly thickened area of *dura mater* in which was one small hard nodule, was exposed, and it had been considered at the time that the pathological lesion was a tuberculum.

The Jacksonian seizures had continued since the operation and had become much more frequent of late.

In the physical examination it was noted that there was facial paresis on the right side of the face. The muscles of the right upper limb were very wasted, spastic and greatly deficient in power, the deep tendon reflexes being much exaggerated.

Tactile localization and discrimination, stereognosis and joint and muscle sense were much impaired. The abdominal reflex on the right side could be barely elicited while on the left side the reflex was active. Muscular atrophy and feeble power were conspicuous in the right lower limb. The deep tendon reflexes were very active, although the response to the plantar reflex was of flexor character. There was no apparent impairment of sensation in the limb.

The cerebro-spinal fluid manifested no increase in tension and no excess of cells or globulin. In the examination of the *fundus oculi* it was noted that the optic discs were slightly blurred and abnormally pale; the arteries were small and no pathological exudate could be detected.

No reaction occurred on application of the Casoni and hydatid complement fixation tests, the Wassermann test and electrocardiographic examination revealed no abnormality.

On radiographic examination a very unusual and remarkable film was obtained. In the film were seen five calcified areas of even density, varying from 2.5 to 5 centimetres in diameter and accompanied by several smaller areas and some *débris*. They lay quite superficially and extended over the whole of the decompressed area. The larger masses all appeared to have smooth edges and this suggested encapsulation. One mass was exceptional in

that it appeared wrinkled and the opinion was expressed that the masses were partially calcified hydatids.

At operation on May 21, 1926, the skin had been dissected back over the region of the former operation for decompression. One of the larger masses had been opened and found to have a thin calcified wall. It was full of pultaceous cholesterol-like material and its contents had been evacuated. It was considered that nothing further in the way of surgical procedure was feasible.

Spinal Tumour.

Dr. Sewell's second patient was a man, aged thirty years, who on admission to the Melbourne Hospital eight weeks prior to the meeting had stated that for the previous ten weeks he had suffered from pains in the thighs, weakness of the legs, loss of sensation and loss of control over the bowels and bladder. These symptoms had developed very quickly and had gradually progressed since the onset.

Neurological examination led to the diagnosis of a tumour pressing on the spinal cord at the level of the second lumbar vertebra and possibly a tumour at a higher level, approximately the sixth dorsal vertebra.

Special investigations had been carried out. X ray examination of the thoracic portion of the spine furnished no diagnostic data. Examination of the cerebro-spinal fluid withdrawn from below the level of the tumour revealed an excess of xanthochrome and globulin, but no increase in cells. Cerebro-spinal fluid obtained by *cisterna magna* puncture manifested no increase in the globulin or cell content. No reaction had been obtained on the examination of the blood and cerebro-spinal fluid by the Wassermann test and the Casoni test, performed on three occasions, had yielded a "doubtfully positive" response in each instance.

A radiogram taken after injection of "Lipiodol" revealed complete arrest of the "Lipiodol" at the level of the upper border of the second lumbar vertebra.

Operation had been undertaken on April 18, 1926, and consisted of preliminary suprapubic cystostomy. Three weeks later the patient's condition had been judged to be sufficiently good for the performance of laminectomy. This operation had been undertaken by Mr. Basil Kilvington who exposed within the *dura mater* a round, smooth, brownish, pulsatile swelling, incision of which was followed immediately by a gush of bright blood. Haemorrhage had been checked by digital pressure and exploration with the finger had revealed a smooth walled cavity which would just admit the tip of the finger. The cavity was plugged with a strip of gauze and the wound closed. Ten days later the gauze was removed and although there was no recurrence of bleeding there had since been free discharge of cerebro-spinal fluid from the wound. This had gradually diminished and the patient had remained free from any signs of meningeal infection.

Since the operation the patient's general condition had improved slowly, but there seemed little if any change in his nervous signs. He was, however, much brighter mentally and was taking an increasing interest in his surroundings.

Dysthyroidism.

Dr. Sewell also demonstrated from three patients who exhibited various manifestations of dysthyroidism.

Tabes Dorsalis with Anterior Horn Degeneration.

Dr. KONRAD HILLER showed a male patient who was suffering from *tabes dorsalis* with anterior horn degeneration. This patient's history will be published in full in a subsequent issue.

Recurrent Gastric Ulcer.

Dr. Hiller's second patient was a man, aged sixty-two years, who was admitted to hospital on April 26, 1926. He had suffered from "pneumonia" ten years previously. For four years the patient had suffered from epigastric pain radiating beneath the scapula and coming on one to two hours after meals. The attacks of pain had usually lasted for about one hour and had been relieved to some extent by the administration of alkalis. Vomiting had frequently

occurred after meals and this had relieved the pain. The patient had suffered from considerable salivation and flatulence. The bowels had always been constipated and the stools had at times been of a tarry black colour. There had been no haematemesis and the pain had not radiated to the apex of the shoulder. Dr. Hiller pointed out that these symptoms had been periodical. The patient usually had three months of pain and six months of freedom from pain.

In August, 1925, a barium meal had been given and a diagnosis of chronic ulcer on the lesser curvature of the *pars media* with periduodenal adhesions had been made.

A few days later Mr. Zwar had excised a chronic gastric ulcer of the posterior surface of the stomach by the trans-gastric method. The stomach had been closed and no gastro-enterostomy had been performed. On microscopical examination of a section of the ulcer chronic inflammatory changes had been found.

After operation the patient had been well for two months under alkali treatment. Then pain had occurred in the epigastrium about two hours after food. The pain had lasted for an hour and had been relieved by alkali and vomiting which was frequent. The pain had radiated to the hypochondrium and the scapula and had wakened him at night. The weight gained after operation had been almost lost. The stools had been dark and tarry. He had suffered from paroxysmal cough for ten years, this had not been worse of late and there had been no haemoptysis.

Examination on admission had shown that the apex of the heart was on the left side 7.5 centimetres (three inches) from the middle line in the fifth intercostal space. The cardiac dulness on the right side had extended two fingers' breadth from the sternum. A systolic murmur had been audible at the apex. Examination of the lung had revealed a condition of general fibrosis with signs of cavitation at the right apex. No tubercle bacilli had been found in the sputum. X ray examination of the chest had revealed general fibrosis with rotation and displacement of the mediastinal contents and heart. Radiological examination of the stomach had revealed the presence of a chronic penetrating ulcer of the lesser curvature five centimetres (two inches) from the pylorus. The duodenal cap had not been satisfactorily distended and it was thought that pathological changes might also be present in the duodenum. As a result of a test meal examination a rapid rise to 100% total acidity and 75% free hydrochloric acid had been found. Delayed emptying had been present. Blood had been found in the second hour together with a trace of bile, but no mucus. The fasting contents had been twenty cubic centimetres, bile had been present and the total acidity had been 87%. The faeces had contained occult blood while the patient was on an early Lenhardt diet. A partial response had been obtained when the blood serum was submitted to the Wassermann test and a complete reaction had been yielded by the ice box method.

The patient was receiving strict alkali treatment with tincture of belladonna and olive oil. He was also taking mercury and potassium iodide. At the time of demonstration he was free from pain.

SPORADIC Hæmophilia in a Syphilitic Subject.

DR. R. P. McMEEKIN showed a male patient, aged thirty-two years, who had presented himself on account of a large haematoma in the calf muscles of the right leg. On inquiry it was found that he bled very freely and for a long time from slight causes and the coagulation time of his blood was forty-two minutes. Advanced osteoarthritic changes were present in both knee joints, these changes were regarded as syphilitic on radiological evidence. There was no history of sudden effusion into the joints following injury. When the patient's blood was sent for examination by the Wassermann test a "+++" reaction had been obtained.

Persistent Achlorhydria.

DR. W. W. S. JOHNSON discussed the history of a male patient, aged sixty years, who had suffered from epigastric pain and flatulence for the previous seventeen years. He admitted that prior to the onset of these symptoms he had been a heavy spirit drinker. An analysis of the stomach

contents withdrawn after a test meal had been carried out eleven years previously and at that time no trace of free hydrochloric acid could be detected. One year later the patient had submitted to surgical exploration of the abdomen and no pathological change could be detected in the stomach, duodenum or gall bladder. The appendix had been removed as exhibiting chronic inflammatory changes.

Physical examination showed that the liver was slightly enlarged but the organ did not appear to be tender. Analysis of a test meal revealed an absence of free hydrochloric acid, the figure for the combined acidity being ten. X ray examination of the upper portion of the abdomen after the administration of a barium meal yielded no evidence of abnormality. No occult blood could be detected in the faeces and no evidence of syphilis appeared from the application of the Wassermann test.

Examination of the blood carried out recently had yielded normal cytological findings, although on former occasions in two out of four examinations the colour index had been slightly above unity. The film had not manifested any gross departure from the normal. By the Van den Bergh test a positive result was recorded to the delayed direct reaction, the patient's serum also reacting in a positive manner to the Foucault test.

Dr. Johnston discussed diagnosis as between pernicious anaemia and cirrhosis of the liver. With reference to pernicious anaemia he pointed out that there was no macrocytosis, the peak of the Price-Jones Curve falling at 7.5 μ .

Pulmonary Neoplasm.

Dr. Johnston's second patient was a man, aged twenty-six years, who first consulted him on December 10, 1925, when he stated that he had been aware of a lump on the right side of the neck for one month. He had been affected with a slight cough and had lost 12.5 kilograms in weight in the course of two years. There had been no haemoptysis or night sweats.

Examination showed the presence of an indurated gland on the right side of the neck and several smaller discrete glands on the left side. No glandular enlargement was apparent elsewhere. Physical signs indicated an extensive pathological process in the right lung. The right side of the chest was immobile and absolutely dull to percussion. The breathing on this side was of "bronchial" character.

A histological report on the gland removed from the right side of the neck designated the pathological process as carcinoma and the existence of a neoplasm in the lung had been confirmed by radiographic examination.

The patient was receiving deep therapy and although the symptoms were being kept in check, the growth was advancing.

Sacro-iliac Fixation.

MR. C. W. B. LITTLEJOHN presented three patients whom he had treated for severe pain located in the sacro-iliac joint.

The first was a man, aged forty-three years, who had suffered from intermittent attacks of severe pain in the region of the left sacro-iliac joint for a period of six months. The patient's location of the pain followed the distribution of the lumbosacral cord on the left side. He exhibited tenderness when pressure was made over the sacro-iliac joint. He complained of pain which he referred to the left sacro-iliac region, when the left hip joint was flexed with the knee joint in extension. No pain was elicited by compression or expansion of the pelvis. A radiogram did not reveal any pathological changes in the sacro-iliac joint. The treatment adopted had been operative fixation of the left sacro-iliac joint by the Smith-Petersen technique.

The second patient was a man, aged twenty-three years, who had complained of pain in the region of the left sacro-iliac joint for one month, the onset had been sudden, in the course of a game of football. He complained that the pain was becoming worse, described it as radiating along the course of the distribution of the lumbosacral cord and as particularly severe when he coughed or sneezed. No abnormality had been found on radiological examination. Operation had been undertaken for the fixation of the sacro-iliac joint.

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In the case of the third patient the treatment adopted for the relief of pain in both sacro-iliac joints, of eight days' duration, had been manipulation and stretching under general anaesthesia.

Renal Diabetes and Acute Nephritis.

DR. C. H. KELLAWAY showed a patient who was suffering from renal diabetes and acute nephritis. This history will be published in full in a later issue.

Osteitis Fibrosa Cystica with Spinal Cord Lesions.

DR. S. O. COWEN showed a male patient, aged forty-two years, who had been admitted to hospital on August 1, 1925, complaining of a burning pain in both legs. The pain had been constant and not very severe for a period of seven months. It had been accompanied by weakness, loss of feeling and loss of control over the legs. The general health had been unimpaired. On examination lesions had been found affecting most of the bones. These lesions had been most pronounced in the right tibia, the left femur, the spine and the clavicle. No changes had been found in the skull bones. Neurological examination had revealed exaggerated knee and ankle jerks on both sides with partial loss of all forms of sensation up to the level of the tenth dorsal segment. The plantar reflex had been of the extensor type on both sides. X ray examination had revealed most pronounced lesions in the fifth, sixth and eleventh dorsal vertebrae. The serum had not reacted to the Wassermann test.

On September 14, 1925, Mr. Zwar had performed laminectomy of the fifth, sixth and seventh dorsal vertebrae. Definite narrowing of the canal with compression of the cord had been demonstrated. Examinations of sections of the bone had revealed the presence of changes characteristic of *osteitis fibrosa cystica*. Great improvement had occurred after the operation and the objective nervous signs had almost entirely cleared up within three weeks. At the time of examination the reflexes of the lower limbs were still exaggerated and the plantar reflex on the left side was equivocal; otherwise the patient's condition was strictly normal and he had no objective sensory changes.

Hodgkin's Disease.

DR. COWEN'S second patient was a man, aged forty-five years, who had been admitted to hospital on April 13, 1926, complaining of weakness and lack of energy of twelve months' duration. He had noticed a lump in the abdomen five months previously. A swelling which had been present in the right armpit for twelve years, had changed in character and had become more "lumpy"; when this change had occurred the patient could not state exactly. He had consulted his doctor three months before admission on account of pain in the region of the lower ribs on the left side. He had lost 7.6 kilograms (seventeen pounds) in weight in eight months, but the loss of weight had ceased when he was given iodide of potash three months previously. A history of primary syphilitic infection seventeen years previously had been obtained; the patient had been treated intermittently for two years.

Examination on admission had revealed an enlarged spleen. The glands in the right axilla and in the left side of the neck had also been increased in size. Blood counts made on several occasions had revealed a moderate anaemia and a lymphocyte percentage of between 55% and 65%; the large mononuclear and transitional cells had numbered 4% to 10% and the leucocytes had numbered 7,600 to 9,000 per cubic millimetre. No reaction had been obtained to the Wassermann test. The patient had been given 0.45 and 0.6 gramme of "Novarsenobillon" at a week's interval and iodide of potash of mercury for ten days without any effect being produced on the size of the glands. On May 2, 1926, a gland had been excised for diagnostic purposes. A section was shown at the meeting.

On May 13, 1926, splenectomy had been attempted, but the spleen had been unremovable owing to a growth in the hilum. On May 27, 1926, the erythrocytes numbered 2,800,000 per cubic millimetre and the haemoglobin value was 70%. The leucocytes numbered 8,500 per cubic millimetre and of these the polymorphonuclear cells were 47%, the lymphocytes 41%, the large mononuclear and transitional cells 8% and the eosinophile cells 4%.

Aortitis with Dissecting Aneurysm.

DR. L. E. HURLEY showed a male patient who gave a history of shortness of breath of three years' duration accompanied by attacks of nocturnal dyspnoea. He also complained of substernal pain and pain in the right breast of two years' duration together with pain near the umbilicus which had been present for six months. Dr. Hurley pointed out that the cardiac dulness on the right side extended 2.5 centimetres (one inch) to the right of the sternum in the second intercostal space, there was also dulness in the left interscapular region behind. Pulsation was present in the second right intercostal space. The aortic second sound was loud and musical. A soft diastolic murmur was present at the aortic region. The heart was moderately large. The liver was palpable and hard. Oedema of the legs was present together with crepitation at the bases of both lungs. Auricular fibrillation was present. The *fundus oculorum* were the seat of chorioiditis. On X ray examination general dilatation of the arch of the aorta was discovered, a fusiform shadow could be seen through the heart shadow to be extending down to the diaphragm. Erosion of the eighth to the eleventh dorsal vertebra was present. A Wassermann test had been carried out and the response was described as "+++". On examination of the larynx impaired movement of the left vocal cord was found, the blood urea was thirty-eight milligrams and the urea concentration test yielded a figure of 3%. Treatment was being carried out by iodide of potash and mercury with digitalis to control the fibrillation.

Disseminated Sclerosis.

DR. HURLEY'S second patient gave a history of an attack of blindness thirteen years previously, the attack had lasted for six months. Tingling and numbness had been present in the arms and hands for six years. Three years previously numbness and tingling in the lower limbs had been followed by loss of power in the leg. The patient had been in bed for twelve months because of weakness and he had suffered from a transient attack of diplopia about two years previously.

On examination nystagmus and intention tremor were present. The superficial abdominal reflexes were absent. In the lower limbs the deep reflexes were increased and a definite extensor response was obtained to the plantar reflex on the left side. Some pallor of the optic discs was present particularly on the temporal side. Contraction of the vision field had also been noted. When first seen two years previously the patient had suffered from considerable weakness and spasticity in both lower limbs and from cerebellar ataxia. In the previous two years the patient had improved considerably. Treatment had consisted of two courses of "Arsenobenzol," six injections being given in each course. Arsenic had also been given between the injections.

Albuminuric Retinitis.

DR. LEONARD MITCHELL showed a male patient, aged forty-three years, who had complained for some years previously of bilious attacks. These had become more severe during the previous year. During an attack the patient had vomited large quantities of clear fluid. He had suffered frequently from watery diarrhoea. For the previous three years he had suffered from frequency of micturition, having to arise two or three times at night to pass urine. During the previous two months the patient had complained of weakness and severe headache. His legs had been swollen, his abdomen distended, his face puffy and his memory defective. During the previous few weeks he had suffered from fits. During the first fit he had become unconscious, had been blue in the face, had bitten his tongue and frothed at the mouth. On admission to hospital it had been necessary to strap him in bed and he had been unable to answer questions. The urine was acid, its specific gravity was 1.015, it contained a large quantity of albumin, but no sugar. Pus cells, red blood corpuscles and both hyaline and granular casts were present. The patient's systolic blood pressure was 210 and the diastolic pressure 125 millimetres of mercury. On examination of the fundi severe albuminuric retinitis was discovered together with many large "woolly patches" and papilledema.

Papilloedema.

Dr. Mitchell's second patient was a female, who was admitted to hospital on May 26, 1926. Two and a half months before admission she had complained of buzzing in the left ear and later on of headache with diminution in visual acuity. Five days previously all her teeth had been extracted and the buzzing in the left ear had ceased, but the headache had increased and vision had become more dim. No sensory loss or motor involvement was present. The reflexes were active. The first, third, fourth, fifth, sixth, seventh and ninth cranial nerves were normal. Dr. Frank Andrew had examined the patient and had concluded that no infratentorial rise of pressure was present. Dr. Mitchell had discovered two diopters of optic neuritis in each eye. The urine was normal.

Retinitis Pigmentosa.

Dr. Mitchell also showed a brother and sister from a family of nine who were suffering from *retinitis pigmentosa*. Four members of the family were similarly affected.

Optic Atrophy and Chorioiditis.

Dr. Mitchell's last patient was suffering from optic atrophy and early chorioiditis. In his opinion the condition was probably Leber's hereditary optic atrophy.

Skiagrams.

DR. HOWARD F. PRAAGST exhibited a large series of X ray films including a number illustrating pneumoventriculography by the direct and indirect (spinal) method, "Lipiodol" in the localization of spinal tumours and in the outlining of bronchiectatic cavities in the lung, gastrointestinal conditions, primary and metastatic malignant disease of bone, bone dystrophies and stereoscopic films of pulmonary tuberculosis.

Radiotherapy.

Dr. Praagst also showed a series of patients who had been treated by radiotherapy.

A male patient, aged thirty-two years, had been first seen on December 12, 1923. At that time an epitheliomatous ulcer involving the right third of the lower lip had been present. The cervical glands which had been enlarged for four months, were excised and X ray therapy had been applied to both sides of the neck. Radium treatment had been applied to the lip on January 11, 1924. No treatment had been used since. A soft scar was present on the lip.

A male patient, aged seventy-five years, had been first seen on September 18, 1925, suffering from carcinoma of the tongue with secondary involvement of the submaxillary glands. The growth, a typical epithelioma, had been present for ten months. Radium needles had been buried in the tumour mass on September 21, 1925. X ray therapy had been applied to both sides of the neck and jaw in October and November of that year. Another exposure of the right jaw to X rays had been made in January, 1926. At the time of demonstration a smooth scar and a cavity were present on the right side of the tongue and the glands in the neck were not palpable.

A female patient, aged twenty-nine years, had been first seen on June 5, 1925, suffering from carcinoma of the *cervix uteri*. The whole cervix had formed an ulcerating fungating mass with extension to the vaginal wall on the left side. The uterus had been anteverted and apparently mobile. The tumour had been considered inoperable. A course of X ray therapy and radium treatment had been given in June, 1925, a second course of X ray therapy in September and a second prophylactic course of radium treatment in December, 1925. At the time of demonstration the cervix had formed a scar and the uterus was small and drawn over to the left side.

A female patient, aged twenty-eight years, had been subjected to laparotomy in March, 1925, when a malignant ovarian cyst, densely adherent and incapable of removal, had been discovered. Three courses of deep X ray therapy had been adopted, the first on April 24, 1925, and the last on December 15, 1925. When first seen the patient had suffered from a large fixed mass filling the pelvis and

extending upwards to the umbilicus. This had gradually decreased in size and had become more mobile with an improvement in the general health.

A female patient, aged sixty years, had been first seen on July 7, 1924, suffering from carcinoma of the thyroid gland. A goitre, present for thirty-seven years, had been removed four and a half years previously, but a sinus had persisted. One year previously a recrudescence had occurred and microscopical examination of a section had revealed the presence of carcinoma. On examination a large fungating mass had been found in the thyroid area. This had gradually increased in spite of X ray therapy given every week for six months at another hospital. Radium needles had been buried in the tumour on July 12, 1924 and X ray therapy had been applied on July 28, 1924, August 19, 1924, and March 3, 1925. Radium needles had been buried for a second time on December 10, 1924. No treatment had been given since March, 1925. On August 31, 1925, the sinus had healed and the patient had remained well since.

A female patient, aged sixty-three years, had been operated on at another hospital in March, 1925, for a recurrent carcinoma of the antrum. A dose of X ray therapy had been given before the operation. When Dr. Praagst had first seen the patient on June 10, 1925, the tumour was growing rapidly, causing the cheek to bulge. X ray therapy had been used on June 11 and radium needles had been buried in the growth in the cheek on June 15, 1925. A second X ray treatment had been given on August 20, 1925, and radium needles had been buried for a second time in the upper antral area. Since then no treatment had been given. On March 23, 1926, the patient had been examined by Dr. Frank Andrew who could see no evidence of the presence of a neoplasm. At the time of demonstration the patient was apparently well.

A male patient, aged thirty-seven years, suffering from chronic myelogenous leucæmia, had been first seen on November 30, 1925. The patient had given a history of increasing weakness for the previous year. The spleen had been enlarged downwards below the umbilicus. The leucocytes had numbered 200,000 per cubic millimetre and the erythrocytes 5,000,000 with a haemoglobin value of 42%. On December 4, 1925, X ray therapy had been applied to the spleen area. On December 10, 1925, the leucocytes had numbered 145,000 and the erythrocytes 3,200,000. Further applications of X rays to the spleen had been made on December 14, and 21, 1925. On January 3, 1926, the leucocytes had numbered 13,000 and the spleen had been palpable only two fingers' breadth below the costal margin. The number of leucocytes had subsequently risen to 22,000 and the spleen had barely been palpable. Another application of X rays had been made to the spleen on March 8, 1926, and on April 9, 1926, the leucocytes had numbered 16,000. On May 7, 1926, the leucocytes had numbered 28,000 and another application of X rays had been made. On May 28, 1926, the leucocytes had numbered 25,000 and an examination of the film had revealed the presence of a few myelocytes and some transitional forms, but the number of abnormal leucocytes had been small. No abnormality of the erythrocytes had been detected. The patient had remained at his work throughout the treatment.

Villous Hypertrophy of the Mucous Membrane of the Mouth and Tongue.

DR. R. R. WETTENHALL showed a patient, aged fifty-six years, who was suffering from villous hypertrophy of the mucous membrane of the mouth and tongue. A patchy keratosis of the body was also present. The serum had not reacted to the Wassermann test by either the ice box or the Harrison method. No fungus had been discovered. The villous condition of the mouth extended on to the hard and soft palate and on to the right side of the floor of the mouth. In parts the hypertrophy of the epithelium resembled the appearance of villi in the small intestine. Dr. Wettenhall said that the appearance might well be compared to that of "honeycomb" tissue. The overgrowth was entirely epithelial and there was no infiltration. The condition was very rare and improvement had followed the use of mouth washes of permanganate of potash and the administration of a mixture containing perchloride of mercury.

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Rodent Ulcer.

Dr. Wettenhall also showed a patient, aged forty-five years, who suffered from rodent ulcer of the nasolabial fold. The ulcer had appeared eleven years and had been excised three years previously. Recurrence had taken place in the scar of the operation. Treatment by X rays had been adopted two months previously and the condition had rapidly healed.

Other Skin Conditions.

A patient, aged twenty-one years, suffered from vascular stasis of the leg with bullous eruptions on the outer side of the right leg. The condition sometimes denoted silk stocking dermatitis. Extreme blueness and coldness of the leg were later followed by thickening of the tissues.

A patient, aged fifty-two years, suffering from *lupus erythematosus* affecting the nose and scalp was being treated by the internal administration of quinine and by the local application of carbon dioxide snow.

A patient, aged twenty-three years, suffering from *acne vulgaris* of two years' duration manifested considerable improvement as a result of X ray treatment.

A patient, aged thirty-four years, suffering from severe *acne rosacea* and seborrhoeic dermatitis of the scalp and body of twelve years' duration had been treated for three weeks. Considerable improvement had followed dietetic treatment and the application of X ray therapy to the face.

A patient, aged thirty-seven years, had suffered from extensive nodular tertiary syphilis involving the neck, face, forehead, shoulders and thorax. It had been present for three and a half years. Antisyphilitic treatment had been commenced seven months previously and at the time of demonstration extensive scarring of the affected areas could be observed.

Carcinoma of Ear and Scalp.

Mr. HAROLD R. DEW showed a patient in whom was manifested the good result which might be obtained from the use of diathermy in a surgically inoperable case of squamous carcinoma of the ear and scalp. The original tumour had been as large as a cricket ball and cauliflower like in appearance. It had extended to the auditory meatus. The patient, aged seventy-eight years, had suffered from the tumour for six months. One application of diathermy had been given. This had been used in a drastic manner in an effort to cause deep coagulation and destruction of all affected tissue. After four months the external table of the temporal bone had separated as a sequestrum. At the time of demonstration the site of the tumour was marked by a small, clear scab under which healing was rapidly taking place. The meatus was not occluded and the lower third of the external ear was intact. The surrounding scar tissue was remarkably supple and healthy. The patient had been under treatment for six months.

"Lipiodol" in Respiratory Conditions.

Mr. Dew also showed a male patient whose bronchi had been injected by "Lipiodol" for diagnostic purposes. This report will be published in a subsequent issue.

Hydatid of the Liver.

Mr. Dew also showed a patient who had suffered from hydatid of the liver. This case will be reported in a subsequent issue.

NOMINATIONS AND ELECTIONS.

THE undermentioned has been elected a member of the South Australian Branch of the British Medical Association:

Porter, J. E., M.B., B.S., 1925 (Univ. Adelaide), Adelaide.

THE undermentioned have been elected members of the Victorian Branch of the British Medical Association:

Grimshaw, Nigel Samuel, M.B., B.S., 1925 (Univ. Melbourne), Alfred Hospital.

Young, David Hastings, M.B., M.D., 1891 (Edinburgh), M.B., 1894 (Adelaide), Sorrento.

Mackay, Eric Eccles, M.B., B.S., 1920 (Univ. Melbourne), Royal Parade, Parkville.

Medical Societies.**THE MEDICAL SCIENCES CLUB OF SOUTH AUSTRALIA.**

A MEETING OF THE MEDICAL SCIENCES CLUB OF SOUTH AUSTRALIA was held at the University of Adelaide on May 7, 1926.

Dental Caries.

DR. CHAPMAN stated that a study of the figures obtained in the examination of the teeth of twelve hundred children appeared to reveal some significant facts. It should be noted that the children represented those from the State schools who were eligible for treatment at a public hospital. They might to some extent be compared to those called "poor" by New York investigators and those of the National Schools of Germany in 1926 by Dietlin. The age group was six to fourteen years.

Firstly, the total number of carious teeth, per child, was found to be: 6.4 for males, 6.6 for females. These figures agreed closely with those of the School Dentist of South Australia, the Government Dentist of Queensland and English figures (broadcast talk by F. D. Ackland, 1925).

Secondly, the eruption periods and incidence of caries of first and second molars was as set out in the accompanying table.

In regard to eruption, the normal periods were: first molar, seven to eight years; second molar, twelve to thirteen years.

Thus there appeared to be a slightly accelerated or normal eruption of first molars and a retarded eruption of second molars. Kayes had found that early retardation of growth in the poor (Boas) was accompanied by acceleration in dentition and that early acceleration in the rich was accompanied by retardation in dentition with increase in the incidence of mal-occlusion. Hellman had found earlier eruption in poor of both sexes with the poor showing the greater number of mouths with teeth in normal occlusion.

TABLE SHOWING ERUPTION PERIODS AND INCIDENCE OF CARIES.¹

Type of Tooth.	Age Period.									
	At 5 yrs.	At 6 yrs.	At 7 yrs.	At 8 yrs.	At 9 yrs.	At 10 yrs.	At 11 yrs.	At 12 yrs.	At 13 yrs.	At 14 yrs.
Percentage of first molars erupted, that is present	12	61	93	97	97	96	92	92	85	81
Percentage of first molars carious	10	18	33	39	54	64	68	77	81	87
Percentage of second molars erupted					2	5	30	60	79	88
Percentage of second molars carious						6	18	25	34	41

¹ In this table it is presumed that all first molars not present at ten years or over have been extracted (caries presumed).

The figures shown appeared to confirm these findings if one accepted a relative degree of poverty and malnutrition as amongst Australian State school children as compared with the sources of investigations abroad.

In regard to caries if the figures were plotted on squared paper the most striking indication was the relative uniformity in the amount of the increase of caries in first and second molars for each subsequent year of life, also the parallelism of the curve for first and second molar caries respectively. This would seem to indicate that the risk of acquiring caries was about equal for any year of child life and that there was a constantly acting external environmental factor concerned in its causation. Internal environmental factors such as endocrine influence in growth and development and fluctuating conditions of resistance to infections would be expected to produce a fluctuating incidence of caries, if alone responsible.

The constant external influence in the light of present knowledge of the pathology of dental caries would appear to be the constant accumulation of fermentable carbohydrates interdentally and in the fissures and cracks in the enamel. Modern foods and luxuries contained the saccharides (mono-, di- and polysaccharides) in a finely divided cohesive form rendering them capable of being packed into normal and abnormal embrasures and remained long enough for the production of lactic acid. Clean sea sand when wet was cohesive, but mixed with seaweed could not be made to hold together. Fine white flour in the form of bread or biscuit would remain packed into an embrasure in the mouth for an appreciable time, while whole meal containing many fibrous elements was soon dislodged by friction of other food, tongue or cheeks. The reason why all the teeth did not decay at the same time was probably because during the eruption of the permanent teeth and the concomitant exfoliation of the temporary teeth the site of mastication was constantly being changed by the child and with it the site of most efficient packing of food-stuffs. This constant change of site not including teeth sensitive from decay as a cause extended from six to thirteen years of age. While the problem was not by any means as simple as this in its entirety, it certainly did appear that, since the bacterial plaque theory was practically negatived as it was ascertained that they were present on all surfaces of teeth even in immune races, the one constant factor must be an unsuitable dietary. This theory so ably championed by Sim Wallace, Pickerill and others, seemed to fit in best with the facts disclosed by the statistics revealed in his (Dr. Chapman's) paper.

Injury to the Eyelid.

DR. H. K. FRY exhibited a piece of stout iron wire which had penetrated the upper eyelid of a young man. The original piece of wire was about four feet long and hung from an overhead trellis. The wire was bent sharply on itself about 1.25 centimetres from its free end. The penetrating point was neither prominent nor sharp. The patient had run upon the wire in the dark. It had pierced the upper eyelid above the dorsal cartilage, everted the lid, emerged on the conjunctival surface and had wedged itself just above the inner canthus depressing the unbroken skin into the orbital cavity. The eyeball had not been injured. The case was presented as a remarkable instance of the penetrability of loose tissue by a blunt object.

Lactic Acid Administration in Cow's Milk.

MR. R. B. ALDERSEY described an improved method of administering lactic acid in cow's milk to infants. He pointed out that the present method was inaccurate as far as dosage was concerned: sixty drops of lactic acid rarely exceeded thirty-five minimis. The quantity required to precipitate the casein in one American pint (sixteen ounces) of cow's milk was one drachm. He further pointed out that a difficulty often met with by practitioners was the teaching of a mother to drop the lactic acid slowly enough to precipitate the casein in a granular form. Both these difficulties could be obviated by Mr. Aldersey's method of administering lactic acid. This consisted of the addition of a corn syrup containing one drachm of lactic acid to the ounce of the cow's milk. The method of preparation

was very simple as it merely consisted of stirring two tablespoonsfuls of the acidified corn syrup into sixteen ounces of sterilized milk.

"Stick Tight" Fleas.

PROFESSOR HARVEY JOHNSTON exhibited adults, eggs and larvae of "stick-tight" fleas, *Echidnophaga myrmecobii*, collected from rats and cats in Adelaide. The flea was very closely related to the *Echidnophaga gallinacea*, the "stick-tight" flea of poultry which occurred in Western Australia and had been taken along with *Echidnophaga myrmecobii* from a dog at Oldea on the Transcontinental Railway Line. Fear had been expressed that the latter might also attack poultry, but it had not yet been recorded as having been taken from birds.

Occidiosis.

Professor Johnston also demonstrated slides illustrating occidiosis of domestic fowls. The disease, due to *Eimeria avium*, appeared to be not uncommon in South Australia, where its presence had previously been unsuspected. It had caused very heavy mortality in many poultry yards in the State.

Poisoning by the Sweet Scented Lily.

DR. F. H. BEARE gave an account of a case in which a child aged one year and ten months had chewed the leaves of the "sweet scented lily" or *Alocasia macrorhiza* (Cunjevoi) and developed symptoms of poisoning. The lips, gums, tongue and mouth were very red and swollen and saliva poured of the open mouth in large amounts. There had been considerable fever and general restlessness. This plant was used commonly as a decorative pot plant in Adelaide.

Professor Johnston said he had read an account of an epidemic of poisoning by this plant in Queensland.

Public Health.

QUEENSLAND.

THE COMMISSIONER OF PUBLIC HEALTH OF QUEENSLAND, DR. J. I. MOORE, has issued his report for the year ending June 30, 1925. The report contains much interesting information, some of it is useful and some of it is not. While a certain amount of good has been accomplished, the interest of the report frequently lies in a revelation of what has not been even attempted.

Statistical.

Queensland prides itself on its position in the world of statistics. It occupies the third position among the countries of the British Empire in the lowness of its infantile mortality rate and the second in the lowness of its death rate. A fall has taken place in the crude birth rate. While the rate in 1915 was 29.25%, it had decreased to 24.89% in 1923 and to 23.88% in 1924. During the last ten years the death rate has fallen by 2.12% and during the same period the infantile mortality rate has fallen by 13.03%. The death rate for Queensland in 1924 was 8.88%. It was second to New Zealand which had a death rate of 7.96%. The infantile mortality rate for 1924 was 51.3 per thousand births. In Western Australia this figure was 49.9 and in New Zealand it was 40.2.

The estimated population for the State for the year 1924 was 834,894; for 1923 it was 811,163 persons.

Communicable Diseases.

The number of cases of communicable diseases exclusive of venereal diseases notified during 1924-1925 was 2,233. During 1923-1924 the number was 2,134. Of the infections notified in 1924, 1,050 occurred in the Brisbane metropolitan area and 1,233 occurred in other parts of the State. Against this increase is recorded the fact that the population of the State increased by 23,000 during the year.

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Anchylostomiasis.

Only two cases of anchylostomiasis were notified during the year by medical practitioners. This fact must not be regarded as indicating that hookworm is non-existent in Queensland. The Commissioner points out that since the withdrawal of the International Health Board of the Rockefeller Foundation from the hookworm campaign the work of inspection is carried out by officers who are under the control of the Commonwealth Health Department. He "regrets" that such districts as Cairns, Mackay and Johnstone have been the subject of adverse reports by the officers conducting the hookworm campaign. The local councils have been practically charged with neglect in carrying out the provisions of the *Sanitary Conveniences and Night Soil Disposal Regulations* and with thus allowing the continuance of the disease. The Commissioner's Department has "strongly brought this matter under the notice of the respective local authorities . . . and called upon them to forthwith apply the regulations to the unsafe closets." It would be interesting to see whether the Commissioner's efforts will cease with the issue of his note. Surely it is time that something more than a polite request should be issued by the Department. A department without the power of compulsion might as well not be in existence.

Diphtheria.

The decrease in the number of cases of diphtheria in extrametropolitan areas from 536 in 1923 to 512 in the period under review is regarded by the Commissioner as "satisfactory," but he is content to fold his hands and to regard as "disappointing" an increase in the metropolitan area from 177 to 451. He adopts the attitude of "I told you so" and explains that the local authorities which have been most dilatory in dealing with directions and instructions issued by the Department almost invariably have the greatest increase in the incidence of diphtheria. Apparently if the Department's directions and instructions were followed out to the letter there would be no diphtheria. In these circumstances it is remarkable that no mention is made of either the Schick test or of prophylactic inoculation. At the same time medical practitioners have used the laboratory of the Department and have sent 7,922 specimens for bacteriological examination. Specimens have also been examined at the Children's Hospital and at the Commonwealth Laboratories at Toowoomba, Rockhampton and Townsville. After the outbreak of plague in 1922 the whole of the metropolitan area was thoroughly cleaned up and kept clean for two years. During this period the incidence of the disease was less. The Commissioner attributes the increase in the number of infections to the fact that during the year under review the cleanliness has not been maintained. The question may naturally be asked as to who is responsible for the neglect. It is, of course, possible that the variation in the incidence in diphtheria may be due to the variations in the curve which are normally seen during any period of years.

Enteric Fever.

The incidence of enteric fever is the lowest on record for a period of ten years. During 1916 the number of infections in the metropolitan area was 283, in the outside areas it was 1,447. During 1925 the numbers were respectively 97 and 217. In his discussion on anchylostomiasis the Commissioner has been charging certain councils with neglect in carrying out the provisions of the *Sanitary Conveniences and Night Soil Disposal Regulations* and with failure to adopt safe fly-proof cabinets. When he discusses enteric fever, he attributes the decrease in infections to be due to the better observance of the provisions of the *Sanitary Conveniences and Night Soil Disposal Regulations* and to the universal adoption by the local authorities throughout the State of fly-proof cabinets!

Plague.

No case of plague occurred during the year. A false alarm was raised in the latter part of June by the announcement that a patient with plague had been admitted to the Brisbane Hospital. The "usual procedure" was adopted by the Department, but the condition proved not to be plague. It is satisfactory to note that rat destruction is being

carried out continuously and that efforts are being made to render the river frontages, produce stores and other waterside premises permanently rat proof. Rat catchers are employed by the local authorities in the metropolitan area and all rodents caught are submitted to a departmental laboratory examination.

Pulmonary Tuberculosis.

A fall has taken place in the number of cases of pulmonary tuberculosis notified during the year. The number for 1924-1925 was 348 and for the previous year 414. A staff nurse is employed by the Department and it is her duty to visit the homes of infected persons for the purpose of advising in regard to measures for the prevention of the disease.

Anterior Poliomyelitis.

A considerable increase occurred during the period under review in the number of cases of anterior poliomyelitis. During the previous period the number of infections was eight, during this period the number was 142. Eighty-eight patients were males and 54 were females. The patients were isolated in hospitals or in their own homes, disinfection was carried out and children contacts were kept from attending school for three weeks.

Puerperal Fever.

Thirty-five cases of puerperal fever were notified during the year. Twelve of these occurred in the metropolitan area. The latter were investigated. No information is given as to what the findings were. Apparently no notice was taken of cases which occurred outside the metropolitan area. The statement that several private hospitals were inspected during the year does not convey any useful information.

Venereal Diseases.

Special attention has been paid to the requirements of the *Health Acts* and *Venereal Diseases Regulations*. There is no material reduction in numbers, but a study of the returns since 1919 reveals a steady fall in the incidence of venereal disease. It will be understood that this statement must hold good only if all the cases are being notified. During the period under review additional clinics have been opened at Mackay and Ayr, both for the purposes of treatment and for the examination of prostitutes. For the latter purpose a clinic has been opened at Bowen. During 1919, 1,473 cases of gonorrhœa and 317 cases of syphilis were notified in the metropolitan area and 817 cases of gonorrhœa and 113 cases of syphilis were notified in outside areas. During the period under review the figures for gonorrhœa and syphilis in the metropolitan area were 808 and 86 and for outside areas 545 and 51. During 1924, twenty-one prostitutes were admitted to hospital in outside areas and twenty-seven in the metropolitan area. During this period the number of persons notified on official Form A. as suffering from venereal disease was 1,681. Of these 178 had been previously notified for the same attack. Of the 1,503 persons remaining, 1,383 were males and 120 females. A table is included in which are set out the various forms of venereal disease and the number of infections in males and females both in the metropolitan and outside areas. The ages of the infected persons are analysed. As might be expected infection is most common between the ages of twenty and twenty-five years. One of the great difficulties in connexion with the administration of a venereal diseases act is instanced in the table concerning the ascribed sources of infection. In only seventy-two instances out of the 1,503 infections could the source be ascribed to prostitutes from houses whose inmates were examined. In 288 cases infection was traced to amateur prostitutes and in 849 the source was unknown or unascertainable.

Four hundred and twenty-three letters were forwarded to male defaulters and one to a female defaulter from the clinic in Brisbane. The latter was interviewed by the police and reattested, while twenty-two of the former were written off as either not notifiable or untraceable. One hundred and eighty-five males resumed treatment and replies are awaited from the other thirty-seven. The names of 179 were referred to the police and they advise that no

trace could be found of seventy-one, five had left the State and one was in prison serving a long sentence. One hundred and two were warned and all resumed treatment. In the previous year, 1923-1924, police action was not finalized in regard to fifteen persons. No trace could be found of ten of these. One had left the State and the remaining four after being warned resumed treatment. Eight of the patients attending the male clinic in Brisbane were prosecuted for failure to continue treatment. Fines amounting to twenty-four pounds were imposed. One male patient was fined for giving a false name and address to the medical officer at a clinic.

It is interesting to note that at the Brisbane Clinic for male and female patients the attendances were large. Attendances of male patients numbered 7,584 and of females 953. Prostatic massage was employed in 15,571 instances and the number of irrigations used for male patients was 50,811. Certificates of cure or of apparent freedom from disease were issued to 140 males and to four females. The standard of apparent cure is not described.

Three notices were issued to females to whom infection had been ascribed by male patients under treatment. One woman was found to be free from disease and two to be suffering from gonorrhoea. They placed themselves under treatment.

Sanitation.

The extension of the Metropolitan Water Supply and Sewerage Board's mains to new parts of the metropolitan area is proceeding steadily. So far this work has not affected the incidence of disease. The Commissioner points out that the rapid extension of the city of Brisbane makes the provision of proper drainage facilities difficult. In many instances estates are being subdivided for residential purposes and buildings are being erected before any drainage facilities are made available. He holds that some of the local authorities may not be altogether to blame owing to lack of funds. He looks to the newly formed Greater Brisbane Council to undertake the arrangement of a satisfactory drainage system prior to the erection of buildings and to prevent the erection of buildings in unsuitable localities. The Commissioner also refers with satisfaction to the success achieved in certain areas in the prevention of disease as a result of the improvements in methods of sanitation. He emphasizes the well known statement that health is purchasable. Sanitary reports from several areas in the State are included. It is not proposed to discuss these.

Food Inspection.

During the summer months of the period under review a bacteriological examination of 129 samples taken from the Brisbane milk supply was made. The bacterial count varied considerably. Sometimes the number was as low as 4,000 per cubic centimetre and the maximum count was 7,524,000. It was decided pending further investigations that not more than 1,000,000 organisms per cubic millimetre should be allowed. The Commissioner points out that bacterial standards of purity are in existence for ice cream, ices and Pasteurized milk. He can see no reason why similar provision for fresh milk should not be equally beneficial, if intelligently and reasonably enforced.

Leprosy.

The number of inmates at the Peel Island Lazaret on June 30, 1925, was 72, an increase of eight during the year. Three patients were reported as cured during the year and were released under surveillance. These patients report themselves at several intervals for "bacteriological examination." They are furnished with supplies of "Antileprol" as a precaution against recurrence of the disease.

Correspondence.

THE AUSTRALASIAN MEDICAL CONGRESS (BRITISH MEDICAL ASSOCIATION).

SIR: I have recently paid brief visits to Sydney, Melbourne and Adelaide in connexion with the programme for this Congress and I desire to express through your

columns my very sincere thanks for the treatment accorded to me in each of these cities.

To say nothing of personal hospitality which has been profuse, I have received universal help and consideration in each city. Some of my colleagues have placed their consulting rooms at my convenience and their secretaries at my disposal. These ladies have been of the greatest assistance and have helped me to cover a range which would otherwise have been quite beyond my reach.

I am very glad to say that as a result of all this the programme is considerably advanced and may be considered quite satisfactory for the present date, though there are still many blank spaces to be filled.

May I add one word in my capacity of Honorary Treasurer? In New Zealand we fully realize that many Australians are in doubt as to the possibility of their attendance and that still more are quite certain that they will not go over. May I suggest that to these members of the British Medical Association that the Australasian Congress is still a matter worthy of their support and that they will be doing a very real service if they will join it, even if they are unable to attend and thus contribute to the very heavy expense of the Transactions, copies of which they will all receive.

I should like to conclude, if I may, with this exhortation: "Join the Congress and come if you can!"

I am, etc.,

D. W. CARMALT JONES.

Sydney, June 24, 1926.

MEDICAL LIBRARIES.

SIR: May one express the satisfaction felt at the prominence which you so frequently give to the necessity for medical libraries, especially your last leading article. The necessity for them is becoming more and more evident and yet nothing practical has been done. True our local society has got an excellent room as a library, but nothing is being done to keep it up to date as far as books are concerned, though in the matter of periodicals the supply is fairly good. The same may be said of the new Medical School Library, an excellent building and shelves poorly furnished and as for the third medical library, that at the Public Library, formerly medical practitioners were allowed access to it, but now for some mysterious reason only officials are admitted to it. To give one instance, showing how poorly all the local libraries are lacking in standard works, I may mention that in none of them is there the latest edition of such a well-known work as Hutchinson's "Food."

I wish, however, to join issue with you, Sir, on one point. You state "the only practical scheme would be to concentrate all efforts on one great library for the Commonwealth." While breathing thankfulness that you as a New South Welshman haven't proposed Canberra as its location, I suggest another scheme which is that in each capital the heads of the three libraries, namely the University, the British Medical Association and the Public Library, meet together at the beginning of each financial year and decide what books and periodicals they will purchase and agree not to duplicate (except in rare instances) the works obtained in other libraries. There would then be in each capital a larger and more varied number of books available. I have previously suggested this method and it only wants a little determination on the part of our authorities to carry it out. It could be done practically at once and though by it we would not have the large single library such as you suggest, I contend that the number of smaller ones would serve a far more useful purpose. As an instance in which there has been a like scheme of cooperation, I may refer to the excellent publication of the "Catalogue of the Natural Science and Technical Periodicals in all the Libraries in Melbourne," compiled by Messrs. Hall and Pitt and issued by the Government Printer in 1911. Want of funds is said to be the cause of this work not being up to date and the same reason is given for the non publication of a similar work compiled by the Bureau of Scientific Industry

dealing with all scientific publications in the Commonwealth up to three years ago. I understand the Federal Government have refused to sanction the cost of publication, but all the cards and necessary material are available to any person making application. I am quite aware that none of our institutions have any surplus money and I am equally aware that one of the first things on which expenditure is lessened is the library, but with judicious action and a spirit of cooperation much may be done. Other institutions than those three libraries mentioned might also join in the scheme; for example, the Walter and Eliza Hall Institute, The Royal Society *et cetera*.

In concluding may one compliment our librarians on their efforts to render the local British Medical Association Library more useful to its members. They have provided a list of periodicals in other Melbourne libraries and also have placed the services of the Assistant Librarian at the use of members who desire to find references *et cetera*.

Yours, etc.,

JAMES BOOTH.

North Melbourne,
June 18, 1926.

Proceedings of the Australian Medical Boards.

NEW SOUTH WALES.

THE undermentioned have been registered under the provisions of the *Medical Act*, 1912 and 1915, as duly qualified medical practitioners:

Eiszele, Lawrence Victor, M.B., B.S., 1920 (Univ. Melbourne), Balldale.
MacGillivray, Ian Hamilton, M.B., B.S., 1925 (Univ. Melbourne), Broken Hill.
Stanley, Ronald Gordon, M.B., 1926 (Univ. Sydney), Marius Street, Tamworth.
Walker, Malcolm Claude Curwen, M.B., B.S., 1922 (Univ. Melbourne), Ashley.

QUEENSLAND.

THE undermentioned have been registered under the provisions of *The Medical Act* of 1925, as duly qualified medical practitioners:

Cameron, Robert Miles Fletcher, M.R.C.S. (England), L.R.C.P. (London), 1903, Brisbane.
Boyce, Clive Rodney, M.B., 1926 (Univ. Sydney), Brisbane.
Mackenzie, Ian, M.B., Ch.B., 1916 (Univ. Edinburgh), Texas.
McKenna, Noel Vernon, M.B., B.S., 1924, M.D., 1926 (Univ. Melbourne), Brisbane.
Voss, Florence Mary, M.B., Ch.M., 1926 (Univ. Sydney), Rockhampton.
Welch, Leslie St. Vincent, M.R.C.S. (England), L.R.C.P. (London), 1907, Brisbane.
Free, Edgar Grove, M.B., Ch.M., 1926 (Univ. Sydney), Corinda.
Outridge, Leslie Macdonald, M.B., Ch.M., 1924 (Univ. Sydney), Redland Bay.

RECIPROCITY BETWEEN GREAT BRITAIN AND ITALY.

Our attention has been directed to an incorrect statement which has appeared in *THE MEDICAL JOURNAL OF AUSTRALIA* of June 19, 1926, page 717, in connexion with the reciprocity arrangements between Great Britain and Italy. The agreement between Great Britain and Italy adopted at Rome is as follows:

His Majesty the King of the United Kingdom, of Great Britain and Ireland and of the British Dominions beyond the Seas, Emperor of India, and His Majesty the King of Italy, desiring to regulate on a basis of absolute reciprocity of treatment the professional practice in the Kingdom of Italy and its Colonies of legally qualified medical practitioners holding diplomas granted in Great Britain, in the British Colonies, in India and in the British Possessions and Dominions, between which and Great Britain medical reciprocity exists, and correspondingly the professional practice throughout Great Britain, the British Colonies, India and the British Possessions and Dominions between which and Great Britain medical reciprocity exists, of medical practitioners holding diplomas granted by Institutes in the Kingdom of Italy and its Colonies, have named as their plenipotentiaries:

His Majesty the King of the United Kingdom of Great Britain and Ireland and of the British Dominions beyond the Seas, Emperor of India;

His Excellency the Right Honourable Sir Ronald Graham, G.C.V.O., K.C.M.G., C.B., His Ambassador Extraordinary and Plenipotentiary at the Court of the Quirinal;

And His Majesty the King of Italy;

His Excellency Benito Mussolini, C.O.S.S.A., President of the Council and Minister for Foreign Affairs:

Who, having exhibited their respective full powers found in good and due form, have agreed as follows:

1. Medical practitioners holding diplomas issued by Licensing Bodies in Great Britain, in the British Colonies, in India and in the British Possessions and Dominions between which and Great Britain medical reciprocity exists, and being legally entitled, through existing legislation and on the basis of their diplomas and the inscription thereof in the medical register of Great Britain, to carry on free professional practice in these territories, can be inscribed on the professional registers of the *Ordine dei Medici* of the Kingdom of Italy in accordance with Article 2 of the law of the 10th July, 1910, n. 455, modified by Royal Decree of the 25th May, 1923 n. 882, and for all purposes of the said law and pursue accordingly their professional practice in the Kingdom of Italy and its Colonies without the need of undergoing any further examination or obtaining any new qualification in the Institutes of the Kingdom of Italy.

2. Inscription on the professional registers, as mentioned above in Article 1, is subject to the observance of the procedure and presentation of the documents prescribed for the purpose by the Italian law quoted above of the 10th July, 1910, n. 455, and by the relative regulations approved by the Royal Decree of 12th August, 1911, n. 1022.

3. Medical practitioners holding diplomas issued by the Institutes of the Kingdom of Italy and being legally entitled, through existing legislation and on the basis of their diplomas and inscription thereof in the professional registers of the Kingdom of Italy, to carry on free professional practice in the territory of the Kingdom and its Colonies, can be inscribed, benefiting for that purpose by the Order of the British Privy Council of the 9th March, 1901, which applied to the Kingdom of Italy the second part of the *Medical Act* of 1886, in the "Foreign List" of the registers of British medical practitioners, and pursue accordingly their professional practice in Great Britain, in the Colonies, in India and in British Possessions or Dominions between which and Great Britain medical reciprocity exists, without the need of undergoing any further examination or obtaining any new qualification from the Licensing Bodies of Great Britain, of the British Colonies, of India, or of the British Possessions or Dominions between which and Great Britain medical reciprocity exists.

4. Inscription in the "Foreign List" of the registers of British medical practitioners, as mentioned above in Article 3, is subject to the procedure and presentation of documents prescribed for that purpose by the

above quoted *Medical Act* of 1886 in force in the United Kingdom.

The present agreement drawn up in English and Italian in double text, enters into force on the date of signature.

It will be noted that the arrangements affect only those British possessions and dominions between which and Great Britain medical reciprocity exists. There is no reciprocity in regard to medical registration between Great Britain and any of the Australian States and in consequence our statement that the clauses would have application to Australia is incorrect.

Obituary.

HERBERT CLATWORTHY.

WE regret to announce the death of Dr. Herbert Clatworthy which occurred at Artarmon, Sydney, on June 22, 1926.

Books Received.

THE OPHTHALMIC YEAR BOOK, Volume XXI. Edited by William H. Crisp; 1925. Chicago: The Ophthalmic Publishing Company. Crown 4to, pp. 323.

A HISTORY OF THE LONDON HOSPITAL, by E. W. Morris; Third Edition, Revised and Largely Rewritten; 1926. London: Edward Arnold and Company. Post 8vo, pp. 303, with illustrations. Price: 7s. 6d. net.

EAR, NOSE AND THROAT NURSING, by James Hardie Nell, D.S.O. C. de G. M.B. (New Zealand), M.R.C.S. (England), F.A.C.S.; Second Edition; 1926. Auckland: Clark and Matheson, Limited. London: H. K. Lewis and Company, Limited. Post 8vo, pp. 106, with illustrations.

THOMAS SYDENHAM, CLINICIAN, by David Riesman, M.D.; 1926. New York: Paul B. Hoeber, Incorporated. Post 8vo, pp. 52. Price: \$1.50 net.

Medical Appointments.

Dr. Clifford Henry (B.M.A.) has been appointed Medical Superintendent, Department of Mental Hospitals, New South Wales.

Dr. John Bostock (B.M.A.) has been appointed Medical Superintendent, Department of Mental Hospitals, New South Wales.

The undermentioned appointments have been made to the Honorary Medical and Surgical Staff of St. Vincent's Hospital, Melbourne: Dr. Herman F. Lawrence (B.M.A.), Honorary Consulting Dermatologist; Dr. F. L. Apperly (B.M.A.), Honorary Physician to Out-Patients; Dr. K. G. Colquhoun (B.M.A.), Honorary Dermatologist; Dr. H. Williams (B.M.A.), Honorary Dermatologist; Dr. A. H. Joyce (B.M.A.), Honorary Ophthalmic Surgeon.

Medical Appointments Vacant, etc.

FOR announcements of medical appointments vacant, assistants, *locum tenentes* sought, etc., see "Advertiser," page xxiv.

AUSTIN HOSPITAL, HEIDELBERG, VICTORIA: Male Junior Medical Officer.

COMMONWEALTH DEPARTMENT OF HEALTH, SERUM LABORATORIES: Medical Officer.

MELBOURNE HOSPITAL, VICTORIA: Officer in Charge of the Department for Diseases of Ear, Nose and Throat.

THE PUBLIC SERVICE BOARD OF NEW SOUTH WALES: Medical Officer (Male).

Medical Appointments: Important Notice.

MEDICAL practitioners are requested not to apply for any appointment referred to in the following table, without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, Tavistock Square, London, W.C.1.

BRANCH	APPOINTMENTS.
NEW SOUTH WALES: Honorary Secretary, 30 - 34, Elizabeth Street, Sydney.	Australian Natives' Association, Ashfield and District Friendly Societies' Dispensary. Balmain United Friendly Societies' Dispensary. Friendly Society Lodges at Casino, Leichhardt and Petersham Dispensary. Manchester United Oddfellows' Medical Institute, Elizabeth Street, Sydney. Marrickville United Friendly Societies' Dispensary. North Sydney United Friendly Societies. Phoenix's Prudential Benefit Society. Phoenix Mutual Provident Society.
VICTORIAN: Honorary Secretary, Medical Society Hall, East Melbourne.	All Institutes or Medical Dispensaries. Australian Prudential Association Proprietary, Limited. Mutual National Provident Club. National Provident Association.
QUEENSLAND: Honorary Secretary B.M.A. Building, Adelaide Street, Brisbane.	Brisbane United Friendly Society Institute. Stannary Hills Hospital. Cook District Hospital.
SOUTH AUSTRALIAN: Honorary Secretary, 12, North Terrace, Adelaide.	Contract Practice Appointments at Ceduna, Wudinna (Central Eyre's Peninsula), Murat Bay and other West Coast of South Australia Districts.
WESTERN AUSTRALIAN: Honorary Secretary, Saint George's Terrace, Perth.	All Contract Practice Appointments in Western Australia.
NEW ZEALAND (WELLINGTON DIVISION): Honorary Secretary, Wellington.	Friendly Society Lodges, Wellington, New Zealand.

Diary for the Month.

JULY 6.—New South Wales Branch, B.M.A.: Council (Quarterly).
JULY 6.—Tasmanian Branch, B.M.A.: Council.
JULY 7.—Victorian Branch, B.M.A.: Branch.
JULY 7.—Western Australian Branch, B.M.A.: Council.
JULY 8.—New South Wales Branch, B.M.A.: Clinical Meeting.
JULY 8.—Victorian Branch, B.M.A.: Council.
JULY 9.—Queensland Branch, B.M.A.: Council.
JULY 13.—Tasmanian Branch, B.M.A.: Branch.
JULY 13.—New South Wales Branch, B.M.A.: Ethics Committee.
JULY 13.—Section of Medicine, New South Wales.
JULY 14.—Northern Suburbs Medical Association, New South Wales.
JULY 15.—Section of Neurology and Psychiatry, New South Wales.
JULY 19.—New South Wales Branch, B.M.A.: Organization and Science Committee.
JULY 20.—Tasmanian Branch, B.M.A.: Council.
JULY 20.—New South Wales Branch, B.M.A.: Executive and Finance Committee.

Editorial Notices.

MANUSCRIPTS forwarded to the office of this journal cannot under any circumstances be returned. Original articles forwarded for publication are understood to be offered to THE MEDICAL JOURNAL OF AUSTRALIA alone, unless the contrary be stated.

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